



18th Meeting of the Southern African and Islands Hydrographic Commission

National Report

France – Shom

Pierre-Yves Dupuy, head of public services and international relations

SAIHC18, Maputo / VTC , 9 - 13 May 2022



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TOP ACHIEVEMENT DURING THE YEAR

International Hydrographic Organization

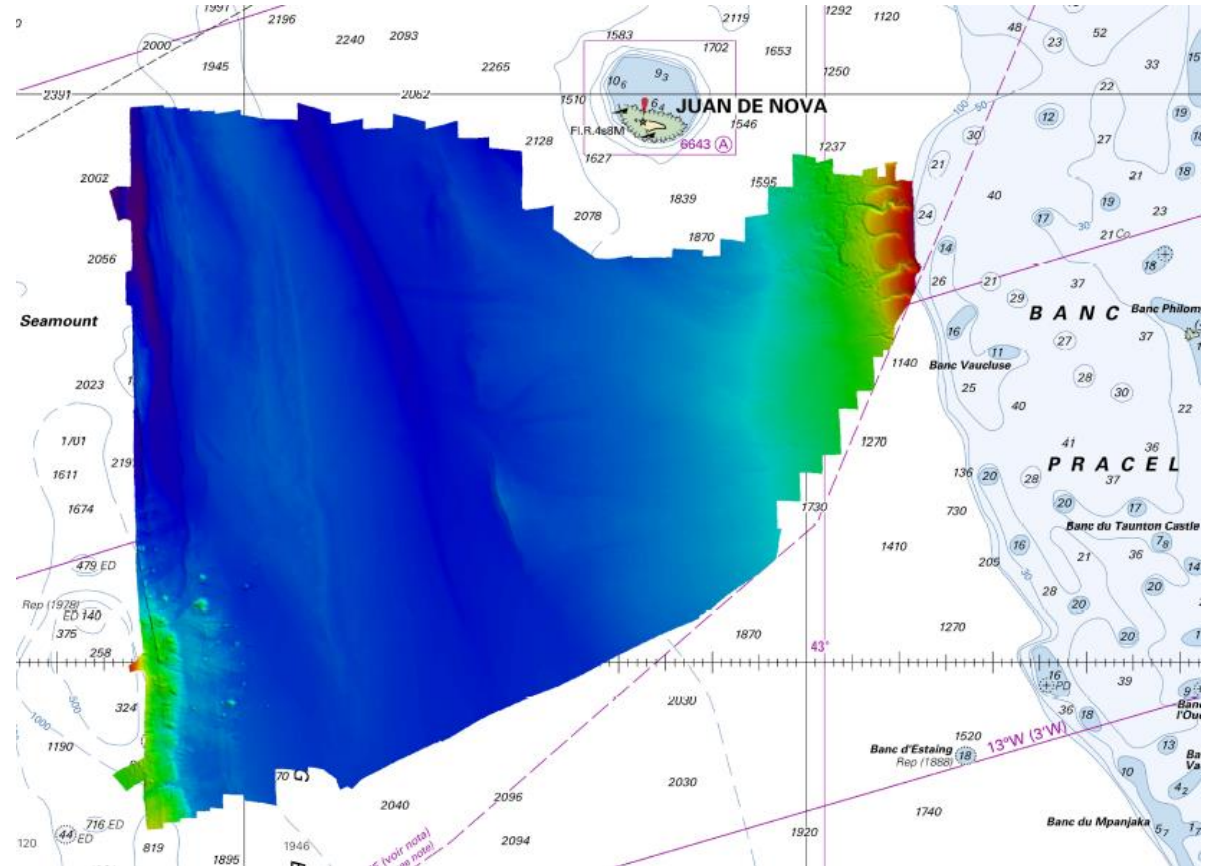
- An hydrographic survey carried out with NO *Pourquoi Pas?* In the Mozambique Channel off Juan de Nova Island

February – March 2021



© Ifremer - Yves-Guillotin

French oceanographic vessel *Pourquoi Pas?*



Survey coverage off Juan de Nova Island in 2021



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TOP ACHIEVEMENT DURING THE YEAR

International Hydrographic Organization

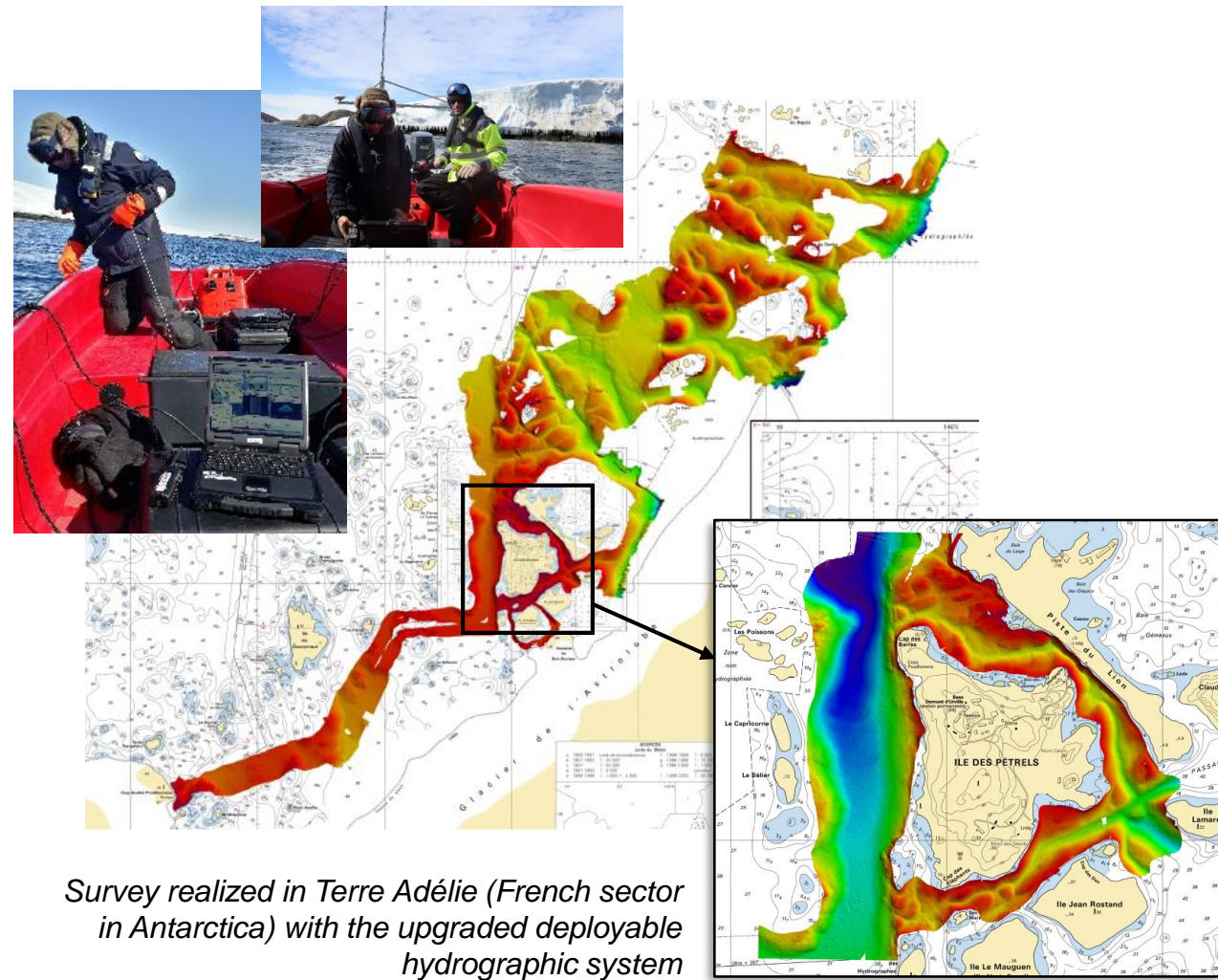
- Upgrade of the Shom's deployable hydrographic system with a very-shallow MBES

(designed primarily for REA

in support to military operations)



MBES Norbit iWBMSH integrated to Shom's deployable hydrographic system



Survey realized in Terre Adélie (French sector in Antarctica) with the upgraded deployable hydrographic system

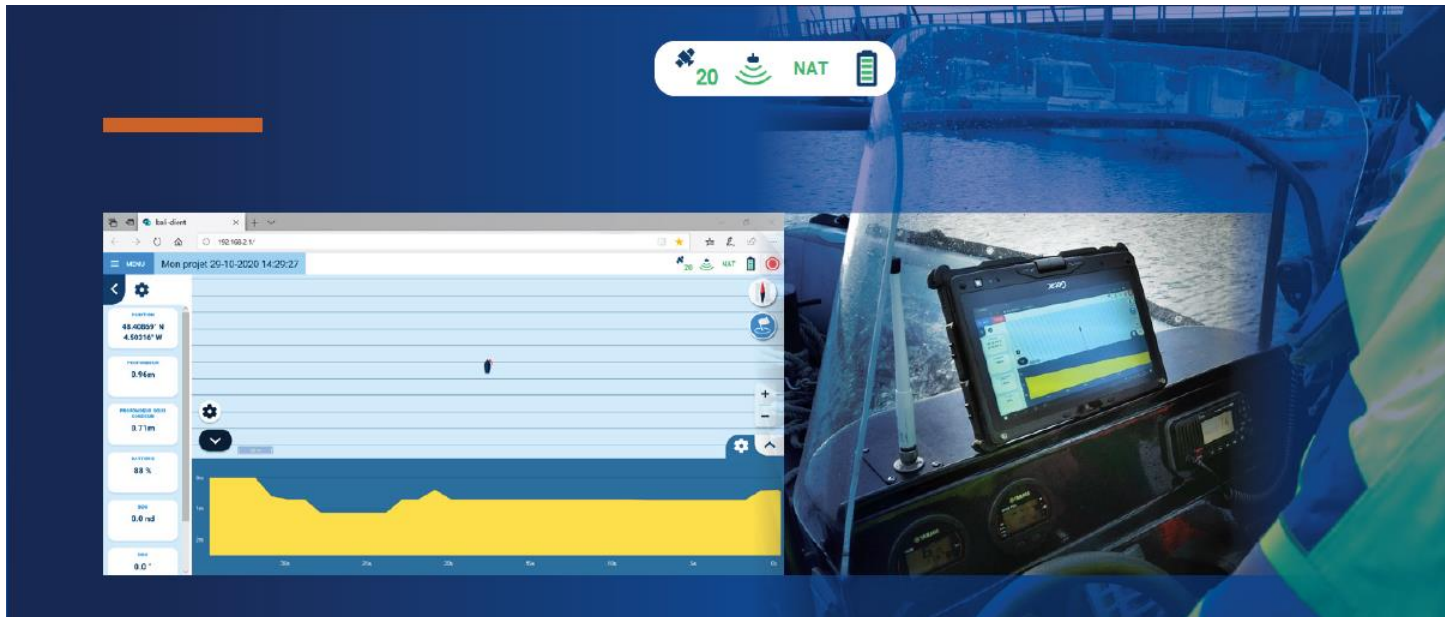


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LIGHT HYDROGRAPHIC SYSTEM

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Hydrographic
Organization

- System designed by Shom for the French Navy ships to make soundings in poorly surveyed areas (overseas)





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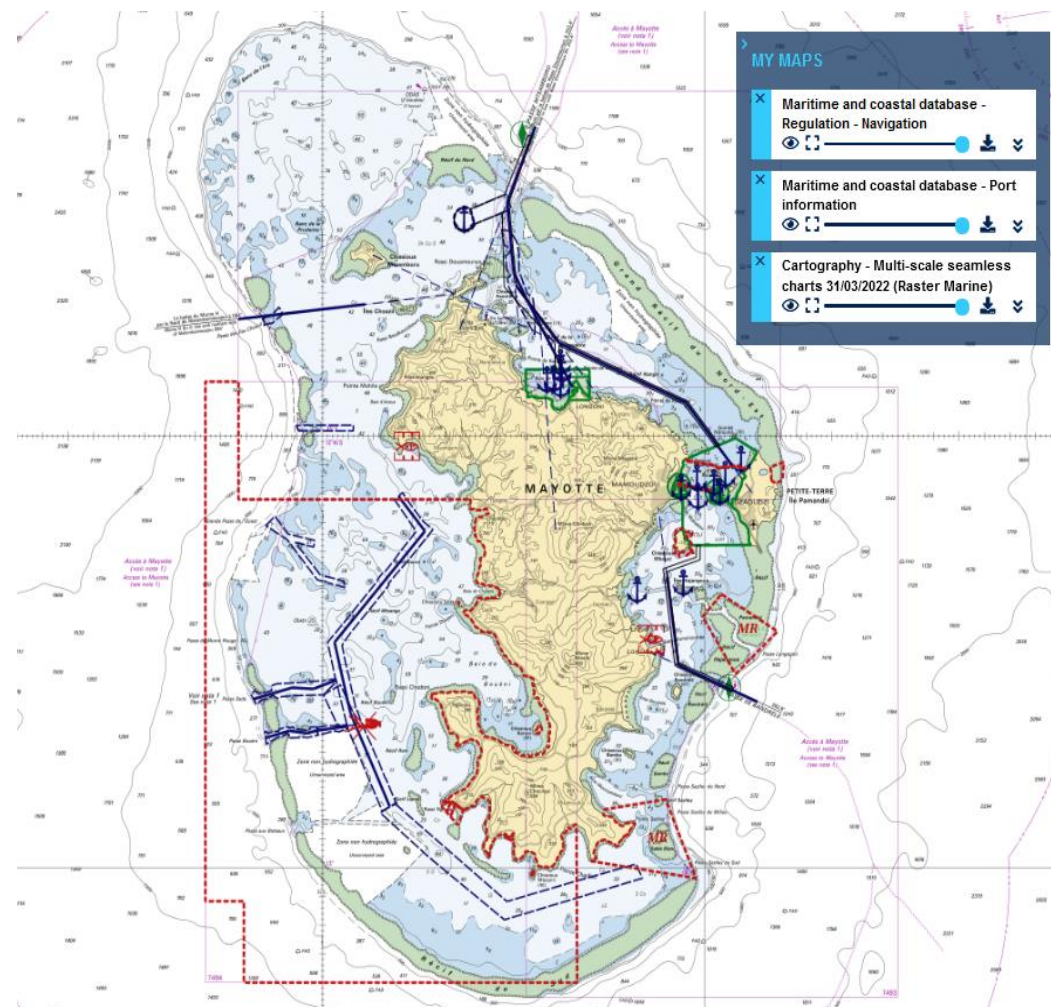
TOP ACHIEVEMENT DURING THE YEAR

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Organization

- MSDI – data.shom.fr : updated layers + new ergonomics

Latest evolutions:

- New layers
 - Port information
 - Regulation – Navigation
 - Search and Rescue areas
- Updated layers :
 - Wrecks & obstructions (edition)
 - Maritime limits & boundaries (edition)
 - Worldwide sediments map (edition)
 - Multi-scale seamless charts (weekly edition)
 - High Resolution Coastline – French Subantarctic Islands (edition)
- New tools and services
(<https://services.data.shom.fr/support/fr>)
- New ergonomics of data.shom.fr portal
- More friendly-user drawing tool



New layers: Port information & Regulation - Navigation (data.shom.fr)



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PROGRESS ON CHARTING AND MSI

• Charting

➤ ENC :

- 8 new cells produced (*Madagascar & La Reunion*)
- 70 FR ENCs available in Region H (out of a total of 110 cells planned)

➤ INT Charts :

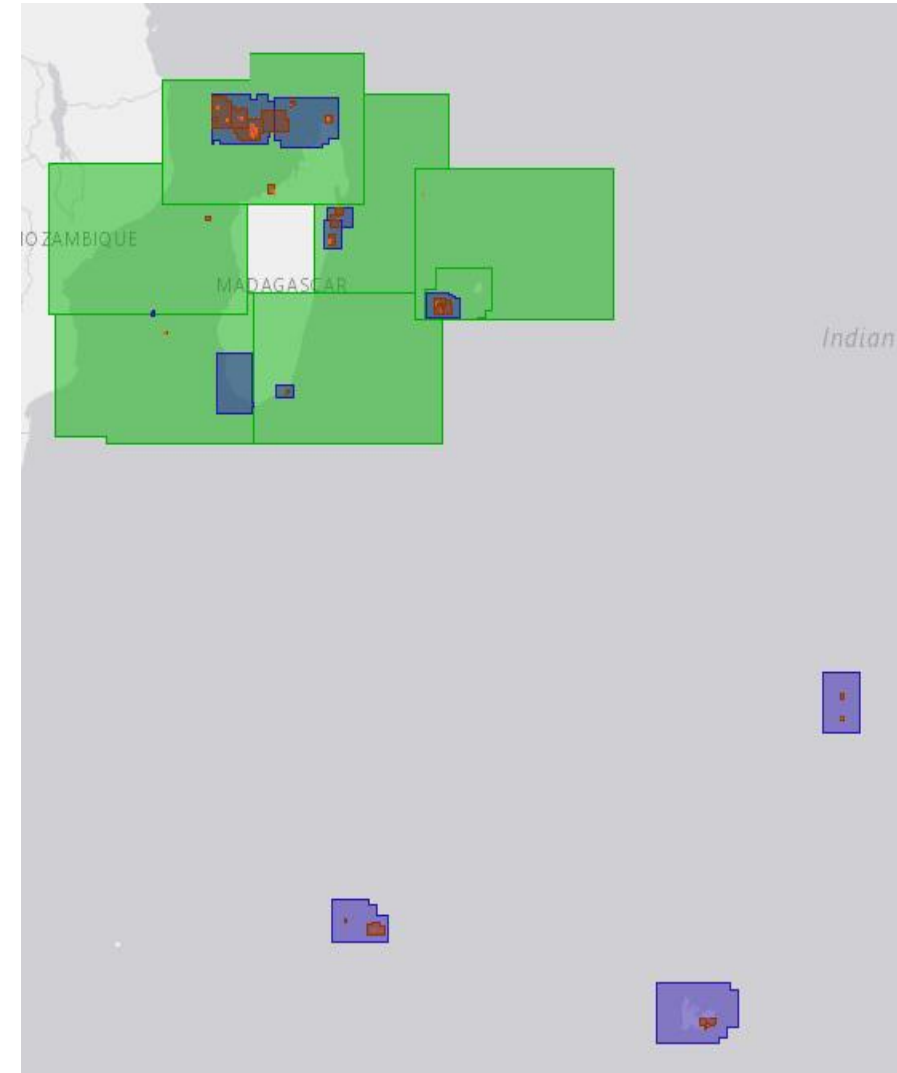
- 1 new edition (INT7736 – FR7183 – *La Reunion*)
- FR INT scheme complete for Region H

➤ Nat Charts :

- 1 new edition (FR7677 – *Comoros Archipelago*)

• MSI :

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



Shom's ENC production within Region H



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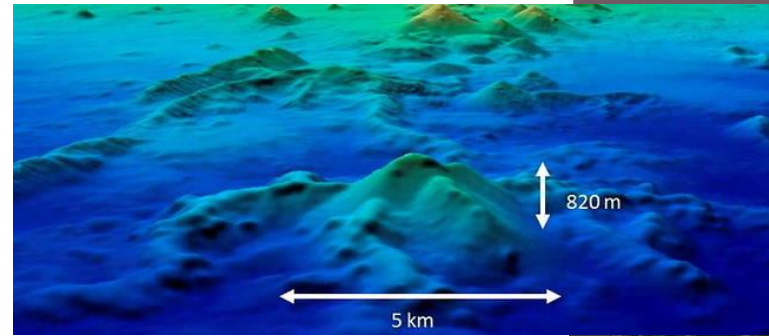
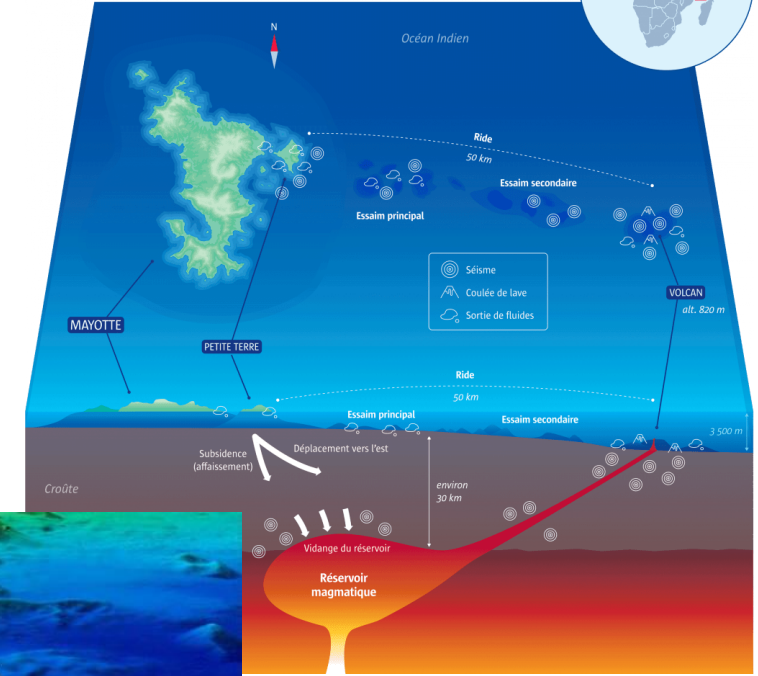
TOP CHALLENGES AND /OR OBSTRUCTIONS



International Hydrographic Organization

• Monitoring of seismic activity in Mayotte

- Since May 2018, the island of Mayotte has been undergoing a "seismic crisis" due to a new submarine volcano 50 km off Mayotte. A volcanological and seismological monitoring network of Mayotte (REVOSIMA) has been set up
- A significant subsidence of the island of Mayotte occurred and results in a mechanical apparent rise of the mean sea level
- The Mayotte tide gauge will have to be recalibrated to determine the new vertical references
- In the meantime, it is recommended to add the value of the sinking to the tidal predictions of Shom. In April 2022, this value is estimated at 18 cm.



Bathymetric DTM of the submarine volcano



The water is close to entering Mamoudzou during the high tides

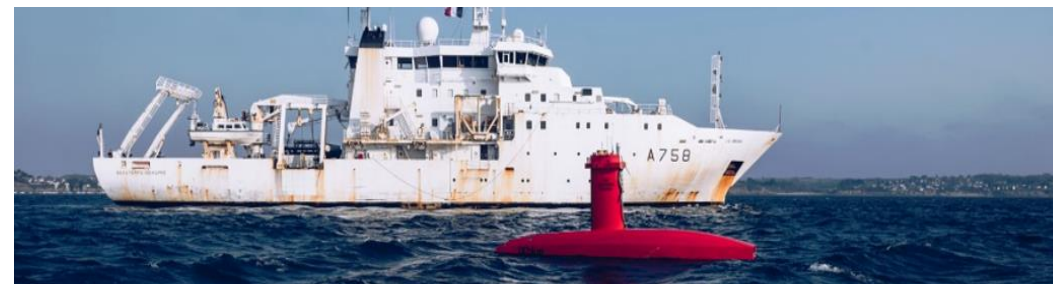


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TOP CHALLENGES AND /OR OBSTRUCTIONS

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- **French national program to prepare the future hydro-oceanographic capacities**



Experiment of USV DRiX deployed from BHO Beautemps-Beaupré

➤ latest experiments

- September 2020 – 2 USV DriX (iXblue)
- January 2021 – AUV Gavia (Teledyne)
- May 2021 – USV Inspector (ECA)
- June 2021 – AUV A18D (ECA)
- August 2021 – 2 gliders Sea Explorer (Alseamar)
- October 2021 – AUV HUGIN Superior (Kongsberg Maritime)



Experiment of AUV HUGIN deployed from BHO Beautemps-Beaupré



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TOP CHALLENGES AND /OR OBSTRUCTIONS

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- **UKHO – Shom S-100 ECDIS collaboration**
 - > **Project as a risk assessment on the Dual Fuel mode of ECDIS**

High level goals

- Develop S-101 understanding, from data production to ECDIS display
- Safety case to support IMO approval of the S-100 ECDIS systems
- Develop RENC capability and support industry on S-100 ECDIS
- Build a testing framework for similar S-100 ECDIS testbed project



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CAPACITY BUILDING

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- **Project management assistance for the construction of hydro-oceanographic vessels**

- **Studies to define**, on the basis of an expression of need, **the complete specifications in terms of hydro-oceanographic equipment**, as well as the fitting out of premises and scientific spaces of hydro-oceanographic ships
- **Equipment acceptance and integration**: supervision of equipment integration (mechanical, interfacing, metrology, etc.), acceptance tests in the factory, in port and at sea
- **Training and assistance**: training of personnel who will implement the equipment, but also of personnel who will maintain the systems, transfer of skills, handling of warranty calls after delivery of the vessel to the end customer



Nigerian hydrographic ship Lana built by the French shipyard OCEA with the support of Shom (Source: OCEA)

Ongoing assistance : Nigeria > following the delivery of the hydrographic vessel Lana in January 2021, secondment of a Shom's hydrographic engineer for one year to NNHO to train and support the survey team.



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TOP PLANS THAT AFFECT THE REGION

(CHARTS, SURVEYS, TRAINING, OTHER)

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- Deployment of the French hydrographic vessel *Beautemps-Beaupré* in the Indian Ocean in 2023, probably off Mayotte Island



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ACTIONS REQUESTED FROM SAIHC17

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1. To take note of the French national report



Thank you for your attention

SAIHC18, Maputo / VTC , 9 - 13 May 2022