



18th Meeting of the Southern African and Islands Hydrographic Commission

CROWD-SOURCED BATHYMETRY (CSB) WITHIN THE SOUTHERN AFRICAN AND ISLANDS HYDROGRAPHIC COMMISSION (SAIHC)

Presented by Commander Christoff Theunissen

SAIHC CSB Coordinator

SAIHC18, 10 – 12 May 2022

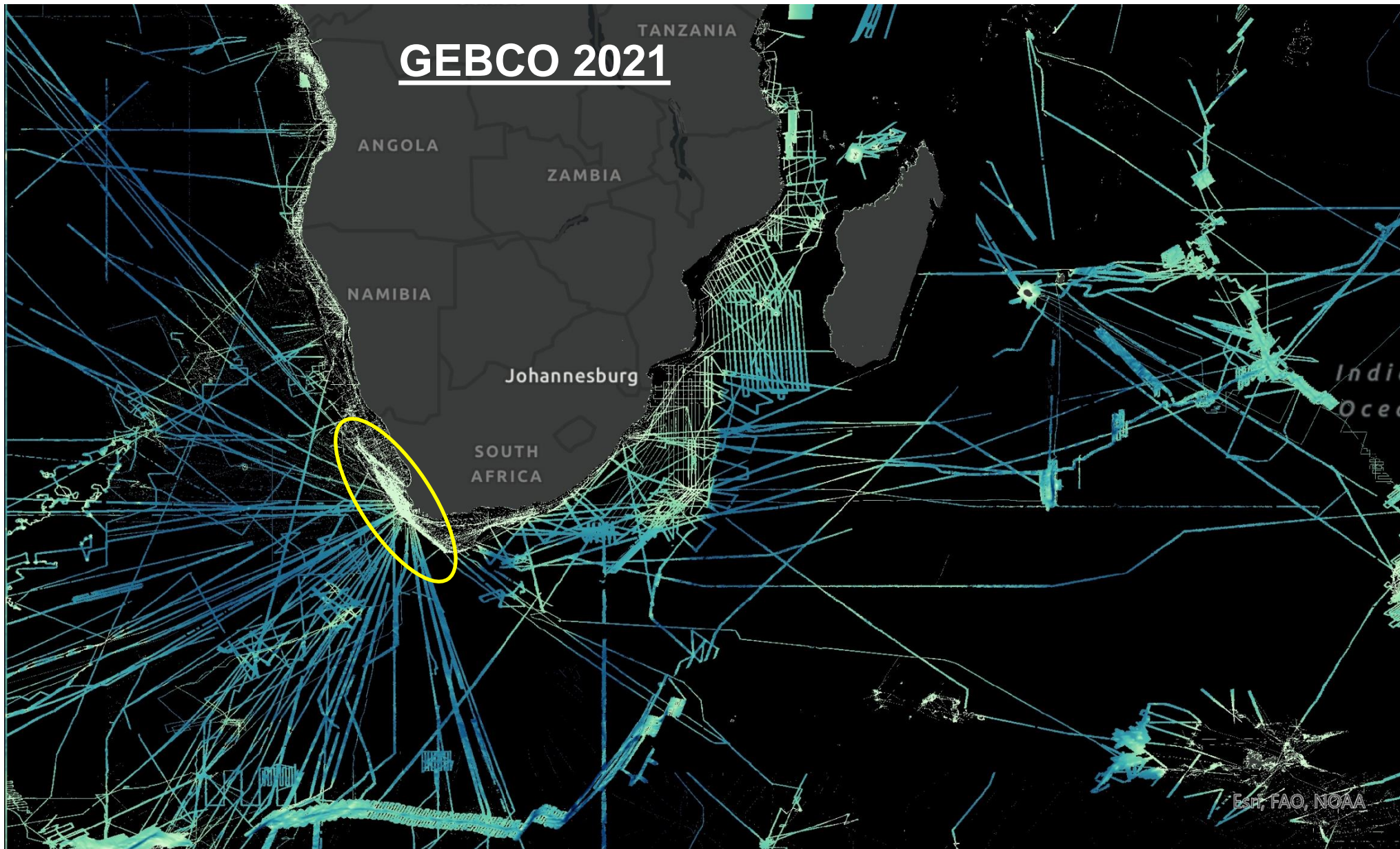


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CURRENT STATUS OF CSB WITHIN SAIHC

International
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GEBCO 2021



Courtesy of Dr V. Ferini
(NOAA)

“Note that some coverage on the western South African shelf that was evident in GEBCO 2020 and GEBCO 2021 is no longer present - this is because the data quality was not very good, and we are actively working on how best to integrate it...”

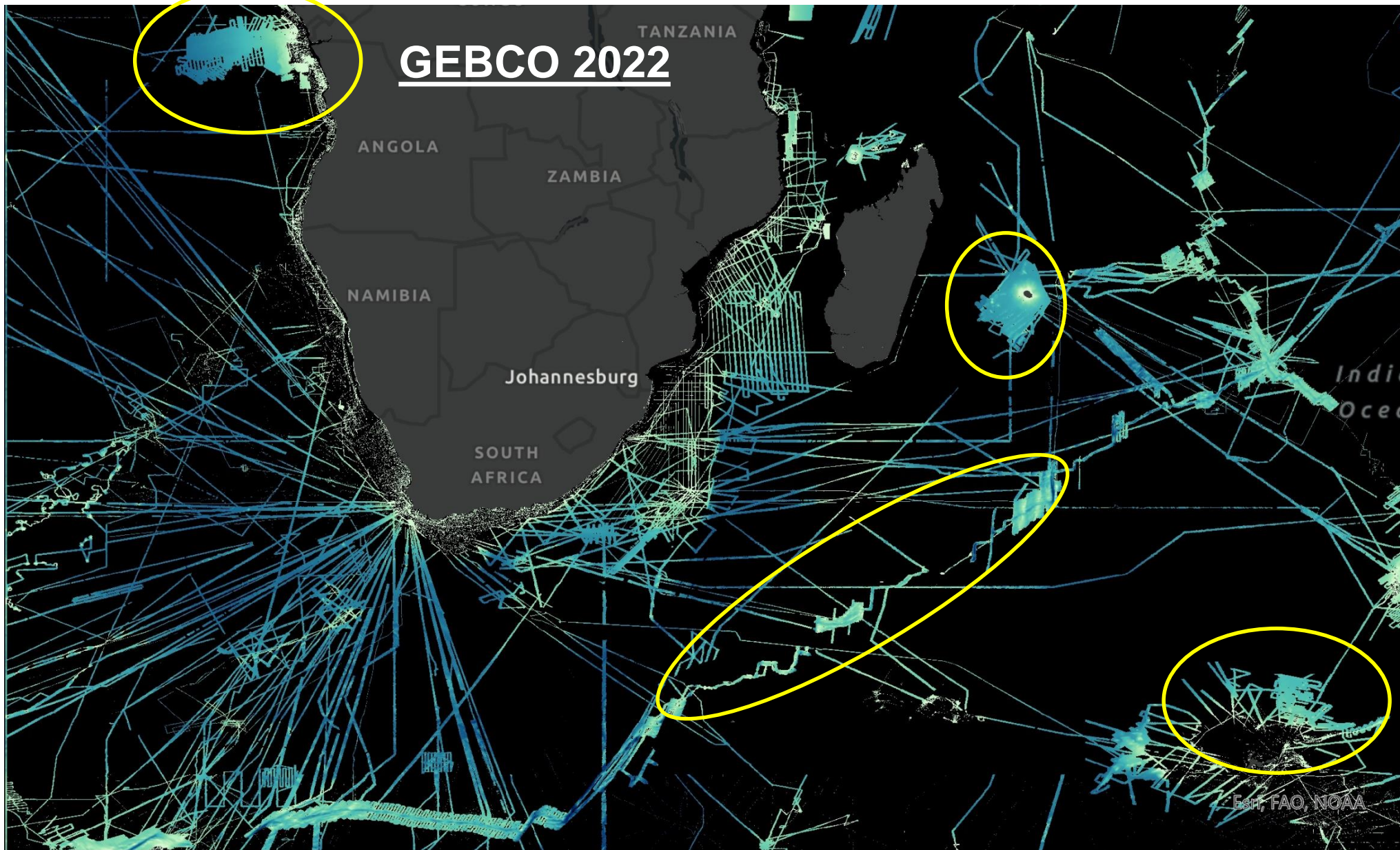
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Courtesy of Dr V. Ferini
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“Note that GEBCO 2022 should be released later this month, at which point we will also have updated statistics for the region, including the recent SANHO data submission, to create the best quality product. This will all be included in GEBCO 2023.”

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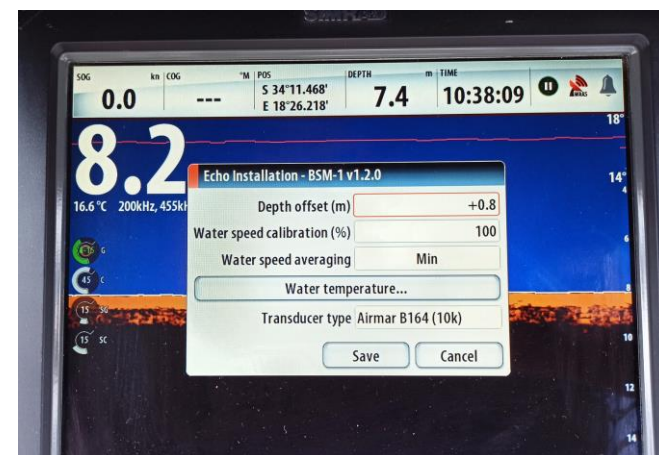


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CURRENT STATUS OF CSB WITHIN SAIHC (CONTD.)

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- **South Africa**. The SA Navy Hydrographic Office (SANHO) reached an agreement to participate in a trial with the IHO and Seabed 2030 by deploying data loggers in RSA waters, for eventual roll-out to SAIHC.
- The SANHO, in collaboration with the Institute for Maritime Technology (IMT), commenced with the two part trial in 2020. The trial concept is as follows:
 - **Part 1: Data Collection**: Data collection involves the collection of bathymetry data by means of installing data loggers onboard vessels of opportunity.
 - Seabed 2030 supplied 50 TeamSurv NMEA data loggers in 2020, followed by 50 Yacht Devices Voyage Recorder in 2021.
 - IMT conducted technical visits, logger installation, setting to work and initial data processing. The SANHO performs the final checking of rendered data before preserving the data in a central database.



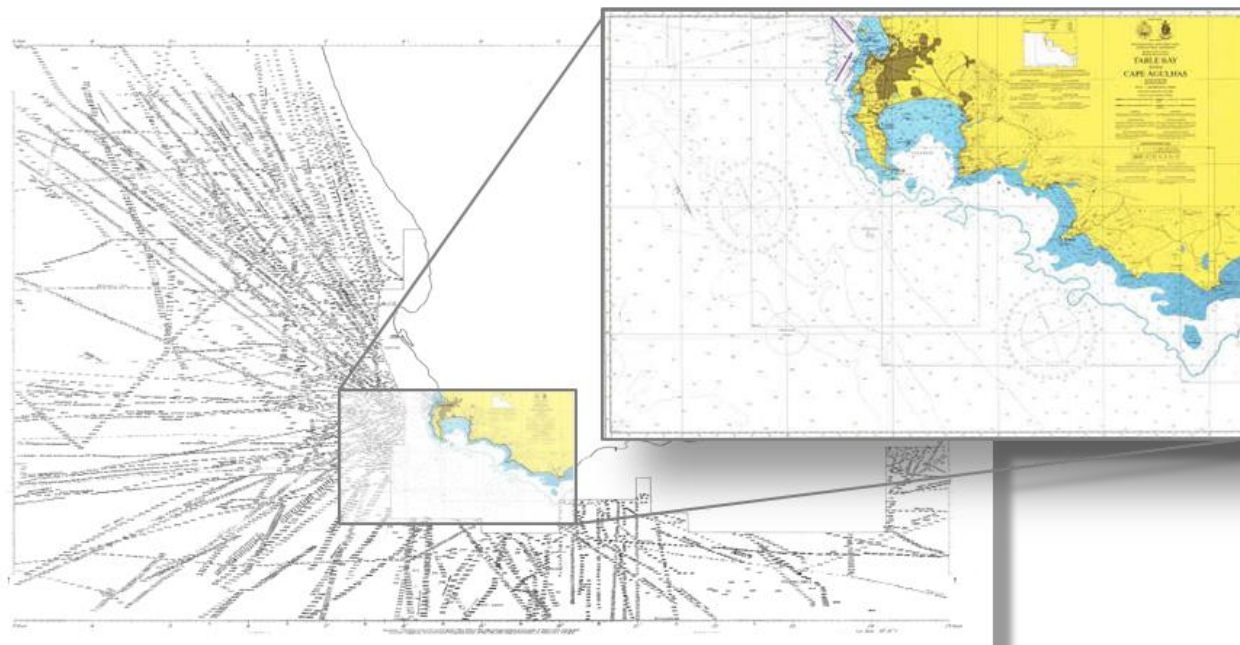


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CURRENT STATUS OF CSB WITHIN SAIHC (CONTD.)

- **South Africa (Contd.)**

- **Part 2: Data Sharing**: Data sharing is the collection of existing bathymetry data from various sources – includes but not limited to existing survey data in the form of bathymetric datasets and gridded products from the survey, exploration and engineering sectors.
- As per Seabed 2030 recommendations, low density datasets and gridded products with large grid/bin sizes or polygons of areas surveyed/explored where data exists can also be submitted and shared with the SANHO.





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CURRENT STATUS OF CSB WITHIN SAIHC (CONTD.)

• South Africa (Contd.).

- **Executing The Trial:** The task of identifying and introducing the concept to local and regional role-players (Part 1 & 2) is ongoing – total of 28 stakeholders have been identified and approached, of which 23 responded favourably.
 - Commercial fishing industries / Small scale/subsistence fishing community
 - Recreational boating
 - Government vessels
 - Private sector
- Currently data loggers installed onboard 5 vessels.
- 8 stakeholders providing datasets and gridded products to the SANHO, one stakeholder providing polygons of areas surveyed, and 5 stakeholders provided further contact information only.
- The data was checked, verified, collated, and submitted to GEBCO in February 2022.



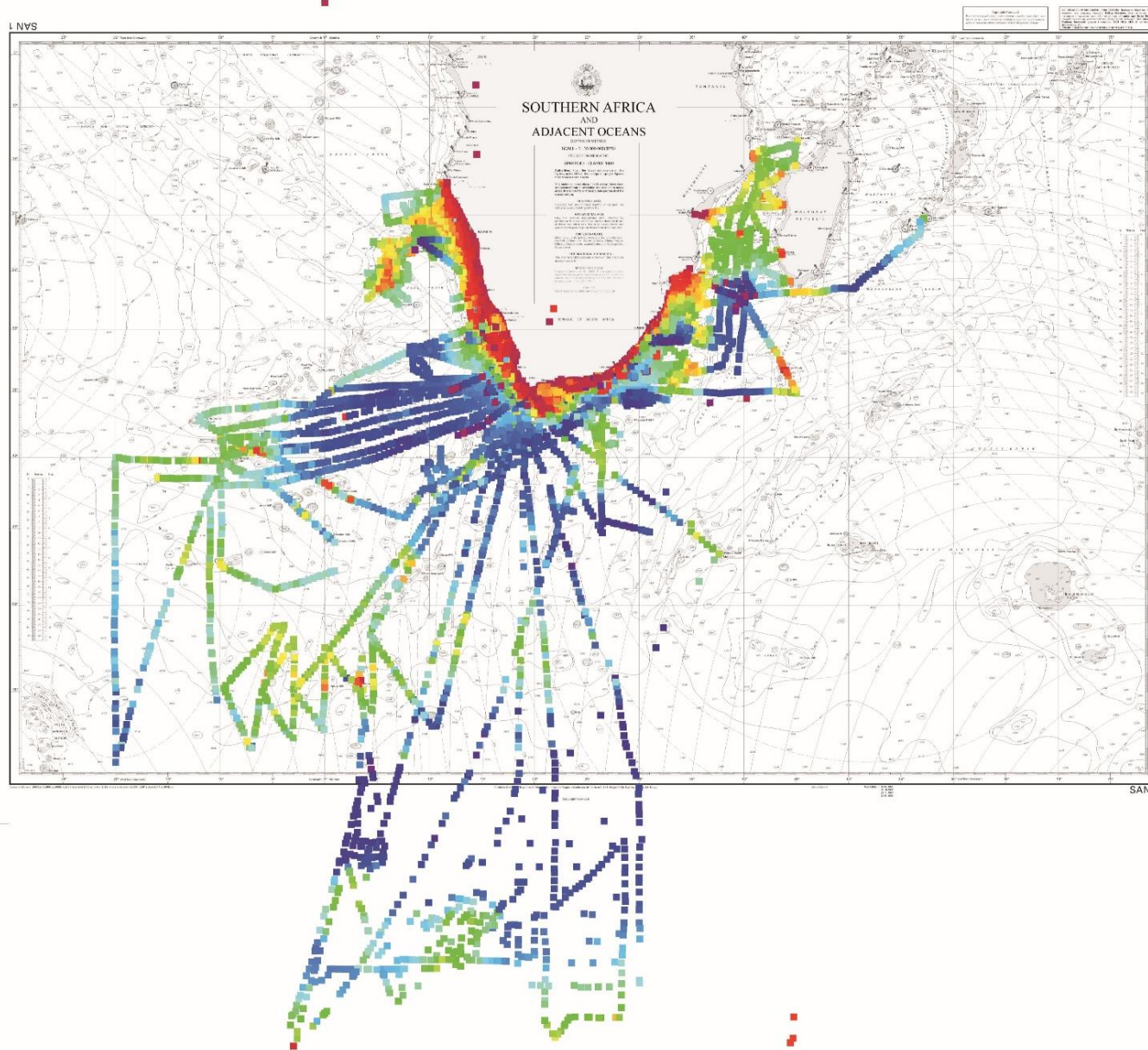


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- South Africa (Contd.)

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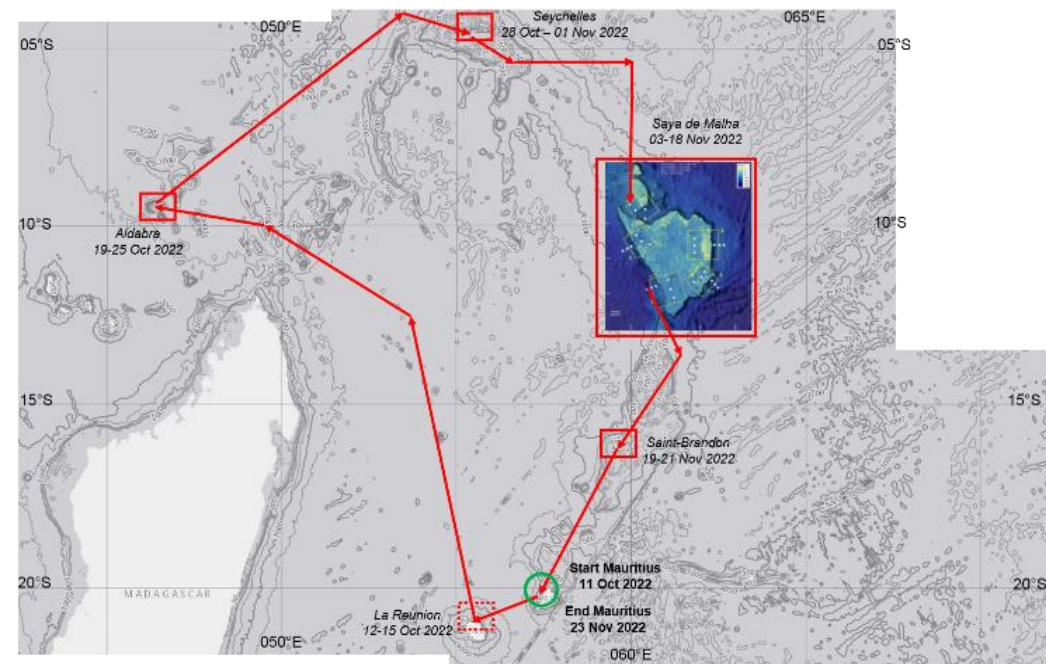
• Monaco Explorations - Indian Ocean Expedition

• Objectives:

- Advise stakeholders through a holistic scientific approach (sustainability science);
- Share knowledge through an ambitious outreach programme;
- Mobilize governments by making available information and analyses to support sustainable management of maritime areas.

• The SANHO supports the expedition by assisting with the planning for the collection of bathymetric data as regional Seabed 2030 Coordinator, in liaison with the Atlantic and Indian Oceans Regional Center.

• It is envisaged that survey operations will be conducted with S.A. Agulhas II (deep sea single beam echo sounder) in 2022.



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IHO CSB ACTIVITIES – IHO-CSBWG

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- The IHO-CSBWG11 last met virtually on 14 – 16 September 2021, with an intersessional meeting to review B-12 over the period 7 – 10 March 2022. Key points as follows:
 - Virtual meetings afford the opportunity to meet more regularly and to allow wider participation - CSBWG11 40+ participants.
 - IHO Director Luigi Sinapi emphasised the importance of continued outreach activity, especially through the network of Regional Hydrographic Commission (RHC) CSB/SB2030 Ambassadors.
 - Encourage all RHC Chairs to bring the IRCC CL 1/2020 to the attention of all coastal states within their respective RHC, encouraging them to offer a positive response, even if qualified, to enable provision of CSB data into the public domain collected from ships within waters subject to their national jurisdiction.
 - Encourage Member States to release datasets or subsets into the public domain via the IHO DCDB.
 - Encourage Member States to support the CSB initiative with positive actions, such as requiring all research vessels to collect bathymetric data for late uploading, when on passage or when it does not interfere with other research activities.
 - CSB/Seabed 2030 RHC Coordinators provided updates and thoughts on CSB related activity in their RHCs, and the CSBWG11 report is to be noted for details.



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IHO CSB ACTIVITIES – IHO-CSBWG (CONTD.)

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- The IHO-CSBWG11 notable action items for Member States are as follows:
 - IHO website: Check IHO website for documents and information.
 - Circulate presentations, articles and papers on CSB to ensure consistent harmonized message is provided at events to advertise CSB, and identify opportunities to highlight CSB and its uses.
 - Renew efforts to engage with administrations to try and achieve some level of data provision.
 - Provide feedback on DCDB developments to allow further development and to highlight areas that could be improved to enhance the user experience.
 - Encourage all RHC Chairs to bring the IRCC CL 1/2020 to the attention of all coastal states within their respective RHC.



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TRAINING AND CAPACITY BUILDING REQUIREMENTS AND OPPORTUNITIES

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- There is nothing new to report from a training perspective since SAIHC17.
- Member States are invited to provide training and capacity building requirements relating to CSB, either within the National Report update, or through the SAIHC CSB Coordinator at hydrosan@iafrica.com

FUTURE INITIATIVES

- Other than the Monaco Explorations expedition already noted, no other activities have been identified.
- Member States are invited to provide planned / future CSB initiatives and requirements relating to CSB, either within the national report update, or directly through the SAIHC CSB Coordinator at hydrosan@iafrica.com



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RELATED MSDI ACTIVITIES AND SUCCESSES

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- The Chair of the IHO CSBWG thanked the SAIHC CSB Coordinator and the SANHO for their leadership in the work done by South Africa in terms of CSB.
- The Chair recommended that RHC Chairs should consider inviting the SAIHC CSB Coordinator to present the South African CSB project at their next meetings – SWPHC, 21 June 2022.
- Evert Flier (GEBCO) further advocated the premise of the Primary Charting Authorities working to support the concept of CSB and encouraging the release of data holdings.
- Jamie McMichael-Phillips, Seabed 2030 Director, clarified that Seabed 2030 stands ready, through the leadership of the IHO CSBWG, to continue to supply support for trials such as this.





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ACTIONS REQUESTED FROM SAIHC18

- SAIHC18 is invited to:
 - Note the CSB report.
 - Consider and update the SAIHC CSB Coordinator on any CSB activity in the SAIHC region.
 - Note the action items on all Member States from CSBWG11.
 - Offer a positive response to the IHO or IRCC Circular Letters
 - Member States not part of the CSBWG to consider joining and/or attending the CSBWG.
 - Report the state of regional and national ocean mapping efforts to the SAIHC SCB Coordinator.