

18th Southern African and Islands Hydrographic Commission
SAIHC18 Plenary Report - Maputo, Mozambique/VTC 10-12 May 2022

Note - this document does not act as full meeting minutes, however it provides an overview of Records of Decisions (ROD) and summary of action items. A summary of actions can be found at Annex A.

All reports and presentations are uploaded on the IHO SAIHC webpage.

The numbering in the report coincides with the agenda items of the SAIHC18 meeting.

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SAIHC18 Plenary Day 1 Tuesday 10th May 2022

[Opening remarks and welcome](#)

Conference was opened by Permanent Secretary of the Ministry of Transport and Communications, Dina Ribeiro, who warmly welcomed all to Mozambique and to the 18th meeting of SAIHC.

Chair Peter Sparkes welcomed the delegation and congratulated the hosts for making a face-to-face meeting a reality during challenging times. He welcomed new IHO Members and SAIHC Members Angola and Kenya, and encouraged all Member States to participate with energy, ensuring we maximise our time together over the week.

Vice Chair Ferhan Khan Juhoor warmly addressed participants and expressed regret that the original plan for Mauritius to host SAIHC18 was hampered by COVID-19. He wished for a positive conference and gave thanks to all in attendance.

IHO Director Abri Kampfer welcomed all to conference and stated that the approval of Workplan 2.0 is a key stepping-stone on our S-100 Roadmap. He highlighted the paramount importance that capacity building has in ensuring we achieve our goals. He gave thanks to our hosts INAHINA.

Host and General Director Simiao Munguambe welcomed delegates with a traditional Mozambican ceremony. He conveyed cordial greetings to members, with special greetings to the organisers for selecting Mozambique as hosts. Mozambique have been a member since 1998 and are a country with a long coastline and interior waters with intensive navigational activities including fisheries and tourism. Improvement of navigation and safety are therefore of great importance. Mozambique, in hosting SAIHC18, is reaffirming its will to get involved in world activities, research, contributing to safety and protection of the marine environment. Simiao urged all countries to work together to meet the IHO goals. Reference was made to the upcoming split of INAHINA which should set the conditions for dynamic and better coordination in-country with international bodies on hydrographic matters.

The Chair then invited all participants to introduce themselves, first those attending in person and then those attending virtually.

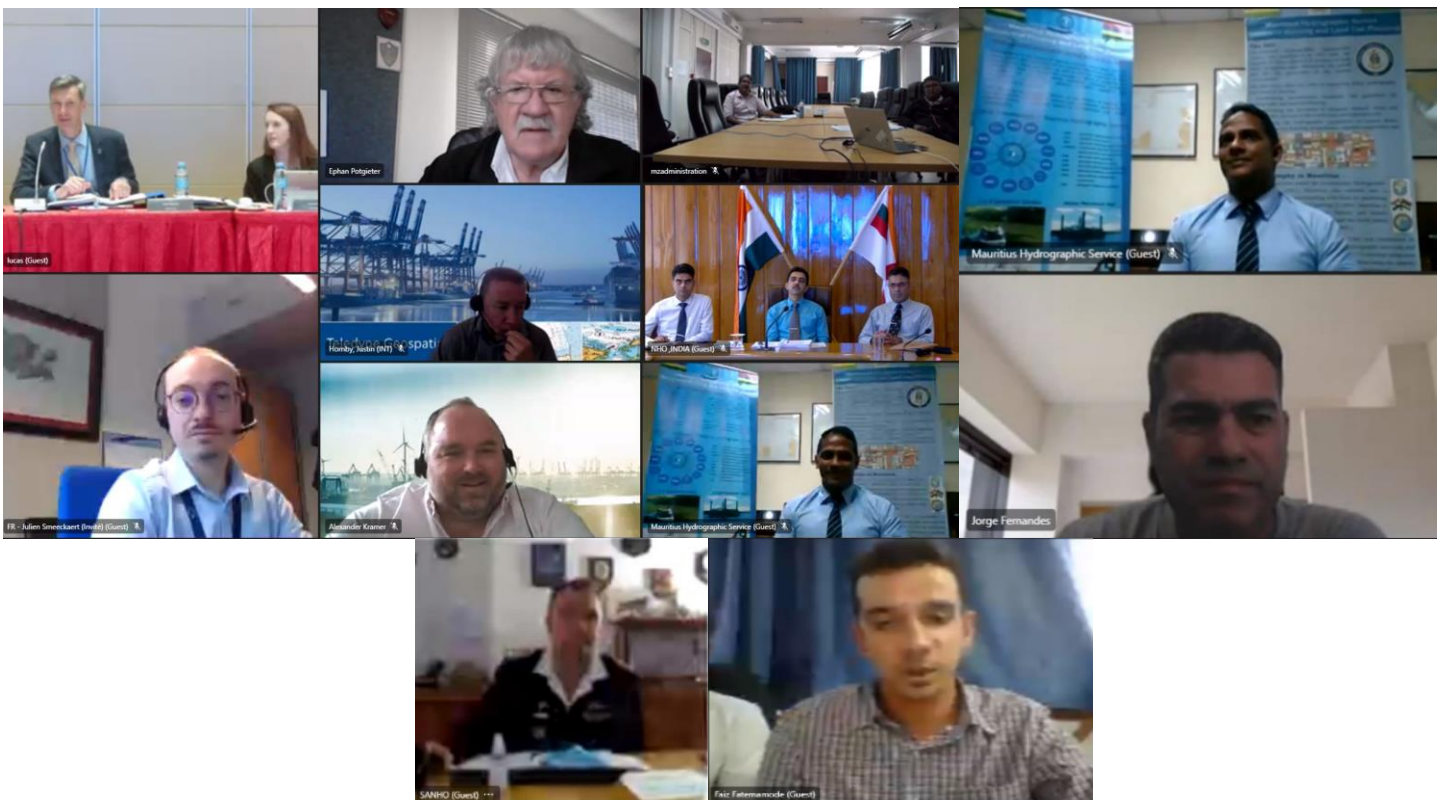
[18th SAIHC Conference Photo](#)

In-person delegates outside the conference hall, Hotel Gloria:

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A selection of the VTC attendees who joined us vis Microsoft Teams:



1.1 Approval of the Agenda

The Chair commented that the draft agenda was circulated in SAIHC Letter 03/2022, and the finalised agenda was circulated in the week preceding plenary. The Chair invited any additional comment, inputs, questions for the agenda, with no comments or amendments the agenda was approved.

Decision 1: Approval of the SAIHC18 agenda.

1.2 Matters arising from Minutes of 17th SAIHC

The Chair said all feedback was considered and incorporated into the amended draft minutes and they are available on the IHO website. He thanked everybody who provided feedback for incorporation into SAIHC17 minutes. The Secretary confirmed no correspondence had been received and there were no comments from the floor, so the Chair confirmed the SAIHC17 minutes.

Decision 2: Approval of minutes of the SAIHC17 meeting.

1.3 Review of 17th SAIHC Actions

The Secretary gave an overview of the current SAIHC actions: Of 33 actions agreed at SAIHC17, 20 were completed, 9 closed and 4 open. Members are reminded that, at SAIHC17, Members approved the closure of 'continuous' actions and, in recent Circular Letter 05/2022, SAIHC Chair suggested that 'ongoing' items could also be closed as they are now being carried out by all members in partnership with regional coordinators.

Action 21 can be closed. UK have signed an MoU with PMAESA, and France do not see the need to establish further contact.

Action 22 is rolled on into next year. Secretary made attempts to invite Nairobi Convention to SAIHC18 with no success. It is agreed to invite them next year to present.

Action 27 can be closed. With follow up from Secretary, Comoros and Namibia have uploaded National Reports for SAIHC17.

Action 28 is rolled on into next year. South Africa and India have submitted contact details for the SAIHC Disaster Response Framework, but all other members are asked to submit their details also.

Decision 3: Proposal to remove ongoing actions endorsed by members.

Decision 4: Actions 22 and 28 are rolled into the SAIHC18 actions list.

Action 1: Invite the Nairobi Convention to SAIHC19 to give a presentation brief.

1.4 SAIHC Statutes Review

The Chair welcomed Angola and Kenya as full members of SAIHC.

The 2021 version of the statutes was circulated via email correspondence in April 2021 in accordance with SAIHC17 action 6. The Chair thanked members for their comments and feedback. Mauritius raised a comment via email regarding Article 7 (c) asking whether we are content to continue with Associate Members allowed to vote, even though this is not true for many other RHCs. Chair asked the floor for comments.

Mauritius stated that this was an observation rather than a suggestion for change. France, Norway, Kenya and South Africa agreed that allowing Associate Members a vote is more inclusive and should remain a part of the statutes. France would like to submit a suggestion for a minor amendment once the statutes are approved, for discussion at SAIHC19.

Decision 5: Version 2021 of SAIHC Statutes is approved.

Action 2: Secretary to circulate final version of the Statutes and submit these to the IHO for the website.

2.1 IHO Secretariat Report

IHO Director Abri Kampfner gave an overview of the IHO secretariat report and directed members to the full report on the IHO SAIHC webpage. The key points discussed were:

- IHO welcomed Angola and Kenya, membership now stands at 98
- Implementation of an Esri-based GIS solution for the visualisation of geospatial data
- Members encouraged to ensure C-55 entries are up-to-date
- Members are reminded that the theme for WHD 2022 is “Hydrography - contributing to the United Nations Ocean Decade”

UK commented that the preceding Hydrographic Awareness Seminar ignited good debate about visualising C-55 using GIS, as worked on by the dedicated project team. C-55 is only as good as the data put in. UK is PCA for many nations in the region and provide supporting input to coastal states annually to enable the full population of C-55 by each coastal state.

UK also reminded members that Tim Lewis is the SAIHC Representative and contribution panel member for the International Hydrographic Review, for which Dr Patrick Westfield is the new Chair. There is guidance for those who are keen to do peer reviewed articles, members are urged to contact Tim if interested.

Norway reminded the delegation that a C-55 review project team was previously established to address the consistent capture of the status of Hydrographic Surveying. The Project Team was paused to wait for the development of S100 Standards to enable further development of C-55.

2.2 Council 5 Report

Capt. Theo Stokes (South Africa) directed Member States to the detailed C-5 report on the IHO website and provided a presentation on the key topics from C-5, held 19-21 October 2021. Key points included:

- Focus of Council 5 was to consider proposals from HSSC, IRCC, the Secretariat for delivery of SPIs for implementation of the IHO Strategic Plan, the Roadmap for S-100 Implementation Decade (2020 - 2030)
- IHO Lab is making good progress with website launch and two pilot projects in progress
- IHO financial status – Member contributions are down on previous years, expenditure down against budget due to COVID-19
- The effective implementation of the Strategic Plan 2021-2026 is to be considered as the main theme of supervision and control of the Council until A-3 in early 2023

2.3 IRCC13 Report

The Chair gave a very brief overview of IRCC13 meeting held 23-25 June 2021, noting that many updates had been covered in the comprehensive C-5 report. Key highlights included:

- Endorsed the proposal of IHO Resolution on the Principles of the WEND for S-1XX Products (WEND-100 Principles)
- Approved the questionnaire on High Density ENC's submitted by WENDWG
- Marine Cartography and Data Assessment (MCDA) programme submitted by UKHO was recognized by IBSC as Category “B”
- IHO DCDB now hosts the GEBCO Gazetteer web tool
- Seabed 2030 Project published the GEBCO 2021 grid with 20.6% coverage
- Focus on determining the value of implementing SPIs at RHC level and completion of gap analysis

Action 3: Complete a Gap Analysis for each goal in the IHO Strategic Plan 2021-2026 (or report on progress).

2.4 HSSC13 Report

Director Abri Kampfer (IHO) gave a brief overview of HSSC13 3-7 May 2021, noting the key items:

- Implementation of the Strategic Performance Indicators (SPIs)
- Experimentation on the application of ISO 9001 principles on the development of S-101 Product Specifications
- Progress in the implementation of the roadmap for the S-100 decade (2020-2030)
- Potential options for HOs for future production of S-101 ENC's in conjunction with S-57
- Progress on the Future S-100 ECDIS and dual-fuel concept
- Establishment of new Project Teams – Baseline Symbology, S-130 and Maritime Autonomous Surface Ships

France commented that a balance needs to be struck to focus on hydrographic survey collection and not just S-100 direction. Member States should support the update of the IMO ECDIS resolution guidance for S-100. RENCs must play a role in S-100 implementation, with the S-57 to S-101 transition. Chair signposts to the IC-ENC presentation later in the agenda which offers an opportunity to make this challenge.

Norway (Evert Flier) supported this view on the role for RENCs. Capacity Building is often cited in the role of transition to S-100, but Member States need to be realistic about funding constraints – if members want this in addition to MSI training/technical visits, they need to consider how to fund this. C-6 and A-3 present new funding opportunities, Evert asks if SAIHC would like to raise this as an RHC at upcoming meetings. Lucy Fieldhouse (UK) reinforces this and confirms that both PRIMAR and IC-ENC are both supportive of Capacity Building.

Mauritius reinforced a point made in the Hydrographic Awareness Seminar that African countries may not be able to meet the standard SPIs due to limited resources.

4.0 IHO Revised Strategic Plan 2021-2026

The Hydrographic Awareness Seminar preceding conference focussed on the IHO Revised Strategic Plan and associated SPIs. Chair therefore gave a brief overview of the purpose of the Strategic Plan, the three goals, the targets and SPIs that sit beneath. SPIs owned or supported by RHCs were presented and a summary of the two IRCC Strategic Plan Workshops held in 2021-2022.

Secretary explained the structure and purpose of the Gap Analysis template created by the SWPHC, as an example tool to aid Member States in understanding their progress against the plan.

RHCs have been given an action to report on SPI progress at C-6. Chair suggested that those who have completed the gap analysis could share their efforts to assist all SAIHC countries to complete their own analysis. France, Norway and UK offered to share their completed analysis and hold a workshop for their region.

Chair commented that IALA, ports, the navigator, the hydrographer will all have a different idea of what is significant. This is not just about depth.

Norway stated that SPIs are a well-known management tool, but what we are measuring is more complex than a simple metric can cover. SAIHC region should be empowered to decide for ourselves what is significant, and we will want more flexibility than SPIs give in their current form. Evert comments that he was a part of the drafting group for the SPIs and the outcome we see was the best approach at the time. It would be better to not have a number at all than one for the sake of it.

Action 4: Circulate the SWPHC Gap Analysis template to Member States.

Action 5: Plan and host a VTC Workshop to share experience of completing a Gap Analysis.

ICCWG Report

ICCWG Chair Alfons Van Craeynest (South Africa) gave an overview of the updates for the ICCWG, and summarised these main points:

- Actions arising from the 9th ICCWG Mtg
- Status of Region H INT Charts – total of 127 INT Charts
- ENC coverage and overlap status within Region H
- ENC Gridding and ENC Improvement Themes (presented by Nick Swadling, UK)
- S-100 Implementation Roadmap

With reference to the S-100 Roadmap, UK commented that UKHO are releasing S122 MPAs.

Mauritius asked if the gridded scheme created new gaps and overlaps. UK responded that, no, the scheme will not exacerbate any ENC gaps / overlaps and hopefully will reduce them.

Norway commented that they adopted a gridded scheme early on and have benefitted from it.

France (Pierre-Yves Dupuy) congratulated UK on the presentation. France does not intend to implement a gridded scheme. Pierre-Yves exposed that grids are of little importance to mariners and other users, who care more about the content and not the limits of cells. National schemes have indeed differences between them, in scales and content, which have an impact on consistency on the global coverage. An action in this area would be beneficial. Pierre-Yves pointed out that making available in the coming years the S-101 ENCs according the milestones of the IHO S-100 roadmap, maintaining until 2030 2 coverages of ENCs (S-101 and S-57), and transforming the existing ENC scheme to another scheme would be a complex task to perform and a very heavy burden for Hydrographic Offices.

Portugal commented that they are not looking to apply a gridded scheme now but may do in the future.

Mauritius asked whether we should consider making square charts to fit the grid shape. Chair responded that this does not feel appropriate given the direction of paper chart sales. 'Triple fuel' is not an option.

Industry Presentation – Kongsberg Maritime

Øystein Aasbø gave an overview presentation on Kongsberg Maritime, including these key points:

- 24/7 customer support is a source of great pride for Kongsberg as customers are operating at all times and in all time zones.
- Kongsberg have a full range of Multibeam Echo Sounders, including those suitable for shallow water.
- Kongsberg assets are increasing on the continent. New hydrographic survey vessels have been delivered in Africa – Morocco, Algeria and Nigeria.
- Excellent live demonstration of the ability to change the parameters of an autonomous vessel from a portal using wi-fi.

IALA commented that autonomous vessels can support fragile locations where personnel may not be able to visit.

Industry Presentation – GeoSystems

Nuno Gomes provided an introduction to GeoSystems, summarised as follows:

- GeoSystems are a Mozambican industry providing positioning solutions for LEICA and Kongsberg.
- A range of hydrographic solutions offered with mostly rail, ports and pipeline laying sectors supported.
- INAHINA customer install of two permanent stations to support operations in hydrographic surveying and install of GPS receivers on vessels.

Industry Presentation – GeoSurvey

Paulo Martinhoe at GeoSurvey gave a presentation to introduce the company, summarised as:

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- Geomatic engineering company based in Mozambique.
- Integrated services to provide fuller picture of dams, river basins – many examples of pulling together numerous datasets – water column, DEMs.
- Chipembe Dam is an example of integration of surveys to create a DTM of the area and similar projects of successful LiDAR and aerial survey commissions.

Mozambique commented that these presentations raise an interesting discussion point about how Member States can work with industries to gain access to data in areas where we are lacking recent examples of bathymetry. It all ultimately helps the regions' safety.

IHO Director Abri raised the idea of HOs and industry working together – industry provides data and HO informs them of quality/anomalies.

Norway commented that many countries do not share, and there are also problems with access to funding. Sometimes this is a case of being told 'no' by authorities who do not understand the need/complexity/value of data sharing and the datasets involved.

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3.1 MSDIWG Report

The MSDIWG Chair Tim Lewis (UK) gave a presentation on MSDIWG activities which covered these main points:

- Minor amendments to the WG ToR to reflect change in coordinator role of CSB/GEBCO
- AGL&RSWG a great example of collaborative working with data collectors such as World Bank and Royal Haskoning
- Introduction to the new MSDI Maturity Roadmap being revealed by the IHO MSDIWG
- A run-through of a 'quick start guide' for undertaking an IGIF-aligned MSDI and MSDI ecosystem map
- Expectation of a new guidance document in collaboration with the World Bank to be available August 2022

Norway commented that MSDI is a complex topic, but Tim has explained it so that it is easy to understand, which is a great achievement. We will increase our value to society if we are able to develop MSDI in region.

Mauritius urged members to view the MSDI presentation they gave at SAIHC17, this can be found on the IHO website. They also commented that the lack of data sharing mindset is a problem which could prevent the success of MSDI development.

Chair reflected on 'marine blindness' of decision makers who consistently forget to include marine in their SDI planning. Working with World Bank will prove the concept of an MSDI and hopefully open up funding avenues.

Action 6: To approve the amendment to the MSDIWG ToR reflecting change in CSB/Seabed 2030 Coordinator role, as outlined in Annex A of MSDI Report.

Action 7: All Member States to supply any further updates to the report provided in April 2022 to MSDIWG Chair (UK).

Action 8: Provide any feedback to the MSDI IGIF Maturity Roadmap quick start guide to MSDIWG Chair (UK).

3.3 Capacity Building Report

Capacity Building Coordinator Lucy Fieldhouse (UK) gave an update on CB matters and covered these main points:

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- Update on the activities of CBSC Project Groups
- Completed and in-progress funded CB activity in SAIHC region in 2022
- Current IHO CB opportunities including upcoming Cat B Programme
- A run-through of the proposed activities within the SAIHC 3 Year Plan (2022-2024)

Norway commented that CB is a strategic pillar of the IHO. COVID-19 has opened our eyes to opportunities for CB material through e-learning platforms and material. The Empowering Women in Hydrography project is dependent on input from Member States. Evert calls for capable women to come forward and get involved, not just for gender equality but also for the improvement of marine information generally.

Comoros asked why non-IHO members cannot access CB training when it is for the greater good of safety. The SAIHC CB Coordinator outlined the IHO CB Strategy and its 3 phases of development. Non-IHO Members can access funded Phase 1 activities to assist in development, but to access Phase 2 and Phase 3 requires IHO Membership. There are, however, free resources available through online courses and webinars that should be taken advantage of such as those developed by IALA.

Portugal informed the delegation that they are in contact with South Korea to translate material into Portuguese, to widen the opportunity for Portuguese speaking nations within SAIHC. Portugal suggested that the efforts made by IHO Members to assist others should be accounted for and considered in the CB Working Plan.

South Africa asked for more time in advance of applications as they are dealing with delays from decision makers. They would also benefit from more notice on opportunities.

Action 9: Inform CB Coordinator of any wider CB opportunities that the SAIHC region can benefit from (also for inclusion in the IHO Calendar).

Action 10: Consider contributing to the Empowering Women in Hydrography Project.

Action 11: Review the SAIHC CB Workplan and consider the proposals for 2024.

3.4 African Great Lakes & Rivers Sub-Working Group Report

Interim AGL&RSWG Chair Nick Swadling (UK) gave an update on activities carried out by the group since its creation at SAIHC17. Key points included:

- Great attendance from interested nations, with invitations to regional organisations such as PMAESA and the Lake Victoria Basin Commission to improve knowledge in the group
- Excellent collaboration with World Bank and Royal Haskoning has resulted in access to new survey data for lake ports
- Existing and future charting requirements, renewing coverage with an ECS and how to open up the flow of safety information.
- Creation of a Hydrography Audit template so far completed by two members aims to improve understanding of capability and capacity building need
- Discussions underway to establish a new AGL&RSWG Data portal, supporting visibility of new navigational products and improved safety

Action 12: Interim Chair to write Circular Letter to members to discuss and coordinate a Technical Working Group Meeting at the Lakes.

Action 13: SAIHC Chair to write letter to Government bodies of members to encourage sharing of data to support safety of navigation.

3.5 IHO-EU Network Working Group Report

SAIHC Representative to the IENWG, France (Pierre-Yves Dupuy) presented an overview of the updates and activities of the WG. The group was created 10 years ago with the signing of the Memorandum of Understanding between the IHO and the European Commission on matters of common interest. The

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European Union is developing policies in the fields of navigation, environmental protection, sharing and improving knowledge of the oceans and seas, and the blue economy.

In particular the European Marine Observation and Data network (EMODnet) involves 15 European Hydrographic Offices. EMODnet enhances existing worldwide data from European countries by making them accessible and producing products. EMODnet bathymetry with 200 DTMs and 30,000 survey entries is a major contribution to GEBCO and the IHO DCDB.

National Reports

The Chair invited members to present a summary of their national report to the SAIHC delegation. All national reports and accompanying presentations (where created) can be found on the IHO website. Additional comments, actions and decisions are summarised below.

6.1 Angola National Report

Helder Rufino presented the Angolan national report. He took the opportunity to thank the regional and international community for their help in making it possible to become a full member of the IHO. Chair and IHO Director expressed congratulations to Angola on both this achievement and a very comprehensive and informative presentation.

6.2 France National Report

Pierre-Yves Dupuy presented the France national report. No comments from the floor.

6.3 Kenya National Report

Victoria Obura presented the Kenyan national report. Mozambique and Norway lead the congratulations to Kenya on becoming full members of the IHO. UK request access to a bathymetric survey referred to in the presentation.

6.4 Mauritius National Report

Devendra Madhow presented the Mauritian national report. UK acknowledged the great work carried out by Mauritius. Mauritius requested that a statement regarding the island of Tromelin be included in this report, which can be found at **Enclosure 1**. In response to this matter, France made the statement which can be found in **Enclosure 2**. Chair reiterated that this forum is not appropriate for addressing issues of territorial disputes between States.

6.5 Mozambique National Report

Simiao Munguambe presented the Mozambican national report. No comments from the floor.

Simiao referred to the division of INAHINA into the Oceanography Institute and Maritime Institute. For reference, the Maritime Institute will now have responsibility for aids to navigation.

6.6 Norway National Report

Evert Flier presented the Norwegian national report. No comments from the floor.

6.7 South Africa National Report

Capt. Theo Stokes presented the South African national report. No comments from the floor.

6.8 Seychelles National Report

Seychelles was not in attendance. An action was taken by the Secretary to follow up afterwards to request the submission of the national report to the IHO website.

6.9 UK National Report

Tim Lewis presented the UK national report. No comments from the floor.

6.10 Comoros National Report

Said Anfane presented the Comorian national report. No comments from the floor.

6.11 India National Report

R.Adm Lochan Singh Pathania presented the Indian National Report. No comments from floor

6.12 Madagascar National Report

Nary Herinirina Iarivo presented the Madagascan national report. No comments from the floor.

6.13 Malawi National Report

Mike Khefasi Hamuza presented the Indian national report. No comments from the floor.

6.14 Namibia National Report

Namibia was not in attendance. An action was taken by the Secretary to follow up afterwards to request the submission of the national report to the IHO website.

6.15 Portugal National Report

Paula Sanches presented the Portuguese national report. No comments from the floor.

6.16 Tanzania National Report

Tanzania was not in attendance. An action was taken by the Secretary to follow up afterwards to request the submission of the national report to the IHO website.

Brian Musinguzi from Uganda requested to present an ad-hoc, verbal national report summary which was well-received by the delegation. His presentation can be found on the IHO website.

The Chair thanked all Members and Associate Members for delivering informative and interesting National Report updates.

Action 14: SAIHC Secretary to contact Seychelles, Namibia and Tanzania and ask them to produce a National Report that can be shared on the SAIHC webpage.

7.1 SAIHC Disaster Response Plan

South Africa briefly introduces the SAIHC Disaster Response Framework and asks Members to read it in slower time. The document is available on the IHO website.

Action 15: All Member States (except India and South Africa) to send contact details to NAVAREA VII Coordinator to complete Annex A of Disaster Response Framework.

7.2 Maritime Safety, World-Wide Navigational Warnings Service and NAVAREA Coordination

NAVAREA VII Coordinator Cdr. Christoff Theunissen (South Africa) provided an update on NAVAREA VII activities in the region since the last meeting in the SAIHC region. The key points are:

- Notable reduction in the number of SafetyNET Messages / Coastal Navigational Warning Messages promulgated in the 2020/21 reporting period compared to 2019, though normal operational functions resumed during COVID-19
- An agreement between South Africa and Iridium has been signed yet, though broadcast trials conducted since April 2021 have been successful to date
- A contingency exercise is planned in 2022 to test joint contingency plan which exists between South Africa, France and Australia
- A challenge remains improving the quality and consistency of received MSI reports from Angola, Mozambique, Namibia, Madagascar and Comoros. Members are encouraged to enrol in the MSI eLearning package with SANHO to overcome this.

UK thanked South Africa for their efforts and reminded delegates about an upcoming MSI course in October, though it is recommended to complete the eLearning South Africa mentioned, beforehand.

Comoros commented that there is some confusion about the NAVAREA within which they should sit which may be affecting communications with South Africa.

5.2 Crowdsourced Bathymetry (CSB)

CSB Coordinator Cdr. Christoff Theunissen (South Africa) gave an update on the current status of CSB, with the following key points:

- Update on the SANHO data logger trial with the IHO, Seabed 2030 and IMT – loggers installed onboard 5 vessels and 8 dataset contributors
- SANHO supporting Monaco Explorations – first is Indian Ocean Expedition in 2022
- IHO CSBWG continues to encourage Member States to release datasets or subset in the public domain via the IHO DCDB

Norway gave thanks to Capt. Theo Stokes for allowing Christoff the time to prioritise this important work. It is great to see South Africa take the lead on this as they have only recently joined the CSBWG. Evert urged nations to consider reviewing their national policies on data sharing, especially where countries are PCA – data is not just for making the best possible chart but also for the benefit of Marine Protected Areas, fisheries and tsunami warnings, for example.

France fully agreed on the importance of data sharing for many purposes. Pierre-Yves explained that in compliance with the Law of the Sea, France requires the authorization of the coastal State to carry out a survey in its EEZ. After the survey, France provides the data to the coastal State, and to no one else. France encourages coastal States to provide data of surveys they have in waters under their sovereignty, including surveys carried out by France.

Portugal recognises the problems related to data sharing. Portugal has been contributing for GEBCO where data is available (example: Portuguese Program SEAMAP2030 aligned with SEABED2030).

UK commented that while they certainly agree on the benefits of sharing across the PCA this is dependent on where it has come from and the restrictions in the usage of that data. The UK is looking to include their data collection so that it can be shared more easily. The UK and Seabed 2030 recently signed an MoU to share data where they can.

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Norway thanked UK for this and recognises the challenges that exist for data release. There is not a strong need for especially detailed data, so Evert is asking for a fairly coarse grid that does not share resource detail. PCA countries conducting surveys within the area should pass on that gridded data at the same time.

Comoros referred to an earlier presentation on Capacity Building and requested that more courses are provided in French, such as the GEOMAC.

Action 16: Consider and update the SAIHC CSB Coordinator on any CSB activity in the SAIHC region.

Action 17: Member States not part of the CSBWG to consider joining and/or attending the CSBWG.

Action 18: Report the state of regional and national ocean mapping efforts to the SAIHC SCB Coordinator.

Action 19: SAIHC Members and Associate Members to contact SANHO to obtain data gatherers provided by NOAA to support data collection for seabed2030.

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5.3 International Association of Lighthouse Authorities (IALA)

IALA (Gerardine Delanoye) gave a presentation overview summarising these main points:

- Update on IALA's transformation from a Non-Governmental Association to an Inter-Governmental Organisation
- IALA World Wide Academy offers opportunities for online training courses and technical webinars
- Update on technical missions delivered in collaboration with IHO
- Future technical missions – offer to support Coastal States

Mauritius commented that training in buoyage and surveying could improve knowledge of the seafloor for local fisherman and asked whether it is compulsory that these users meet IALA requirements.

Gerardine states that SOLAS applies to more than just large vessels over a certain tonnage, chapter V applies to all vessels down to wooden canoes not detectable by radar. She also comments that, though the Great Lakes and Rivers is beyond the remit of IALA, she knows the buoyage system and so IALA is happy to support Member States in these areas.

5.4 Southern and East African and Islands Regional Group for Safety of Navigation and Marine Environment Protection (SEAIGNEP)

Pretty Molefe gave a presentation overview which compromised these key points:

- SEAIGNEP functions primarily as a discussion forum and communication facilitator between Member States
- SEAIGNEP is unique in that, excluding IHO RHCs, it is the only regional group addressing issues relating to safety of navigation and marine environment protection in the South, Central and East African region
- The group can provide support towards implementing action plans, charters, strategies and in preparation for audits.

5.5 Port Management Association of Eastern and Southern Africa (PMAESA)

Mubarak Sodha gave a presentation on behalf of Col. Andre Ciseau, covering the following main points:

- An introduction to PMAESA as a non-profit, inter-governmental organisation comprising numerous bodies as well as its role in the Pan African Association for Port Cooperation (PAPC)
- Areas of focus include standardisation, collation and harnessing of information. Providing competence and expertise to members, having collaborative relationships and influence in the policy framework.
- Ongoing initiatives include World Bank/SSATP, UNECA, IMO, Trademark East Africa, UK AID and Cruise Africa

The Chair thanked PMAESA for the presentation. UK commented that PMAESA's presence at SAIHC helps us to reconnect and to learn more about the area.

5.1 General Bathymetric Charts of the Oceans (GEBCO) and Seabed 2030

Chair of the GEBCO Guiding Committee Evert Flier (Norway) gave a presentation on the updates for GEBCO and Seabed 2030, summarised here:

- GEBCO is a community of professional all over the world, collaborating irrespective of background or politics
- New Ocean Panel created at COP26 – goal to protect 30% of world's oceans as MPAs
- Governance Review now in progress – aims for better alignment with SB2030, IHO and IOC
- GEBCO Strategy process has begun
- Seabed 2030 focus is now on smaller areas, having covered the 'low hanging fruit'
- Updates on the SB2030 Project Work Packages WP1-5

Industry Presentation – Teledyne Caris

Justin Hornby gave an overview presentation, summarised by the following key points:

- Teledyne CARIS have been providing GIS solutions in the maritime community for 40 years, and their software is used by more than 90% of IHO Member States
- Focus on GIS standards and development of interoperable marine GIS solutions – involved in OGC, MSDIWG and others
- World leader in high-accuracy LiDAR systems – bathymetric LiDAR
- AI-driven bathymetric noise removal and land/water classification technology

Industry Presentation – Unique Group

Andrew Laing presented an overview, the key points of which are as follows:

- Unique Group provides bespoke, off-the-shelf engineering solutions across the oil and gas supply chain – onshore and offshore, surface and subsea.
- An introduction to their range of Automated Survey Vessels for carrying out efficient offshore survey operations – Uni-Pact and Uni-Cat.
- Demonstration of how Unique Group's ASVs can support at all stages of disaster management - Mitigation, Preparation, Response and Recovery.

SAIHC Input to IHO Meetings - Report to IRCC14 and 6th IHO Council considerations

The Chair asked the floor for suggestions to raise at IRCC14.

UK suggested that the attendance achievement at SAIHC18 be raised, as well as the successes in the African Great Lakes & Rivers Sub Working Group such as the improvements to data holdings.

France commented that the two most difficult IHO Strategic Plan Indicators to deal with are 1.2.2 and 2.2.1. The EAtHC, under the Chairship of Portugal, discussed how to define navigationally significant areas. Establishing a list of features would be complicated, a depth limit would be easier. At the 2nd IRCC workshop, it seems that there is a global convergence on the use of a depth limit value. During the workshop, the value of 200 m was mentioned. Even limited to high scales ENCs, this value has the disadvantage of including large areas that are not significant for navigation. If activities such as trawling are to be included, 200 m is not particularly relevant either. A much more relevant value for shipping would be appropriate. What about 50 m? As a result, C-55 does not look useful for this SPI in its current format with no distinction on navigationally significant areas. Here, the objective is to have an assessment with an appropriate indicator whatever is the hydrographic knowledge. The CATZOC present in ENCs could be retained.

Secondly, on SPI 2.2.1, the EAtHC for this indicator has also raised a number of questions. C-55 and CATZOC do not seem appropriate when the indicator is for the goal 2 (for the benefit of the society, not only for navigation). 'Adequately surveyed' is analogous to a satisfactory state of knowledge of the funds.

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At the 2nd IRCC workshop, Portugal made the proposal that the Seabed 2030 coverage could be used. In particular, it seems excellent to use a global Seabed 2030 project that has already established criteria for measuring the adequacy of knowledge to needs.

Norway supported the suggestion using Seabed 2030 coverage as the indicator for improving knowledge. A survey is not worth much if the knowledge beneath is not made available, which Seabed 2030 is. This would support reporting on coverage for the SAIHC region.

Portugal supported this approach also as goal one is based on our standards, and the point is for the benefit of wider society.

UK supported and suggested that Chair could feed back that 'adequately surveyed' needs to be carefully considered as this is still not covered off by the Seabed 2030 approach.

Action 20: Chair to provide updates to IRCC14 on SAIHC18 attendance success, AGL&RSWG achievements and to support the use of Seabed 2030 coverage as an indicator for SPI 2.2.1.

8.1 IC-ENC RENC Update

James Harper (IC-ENC) presented a general overview of what IC-ENC do, their structure and development of their online support and learning offering, including S-100 introductory training. He also summarised the latest S-100 developments.

The Chair thanked James for his update. South Africa asked how current ENC analysers will be affected by S-101 improvements and whether this will require upgrades to COTS tools. James explains that IC-ENC are testing the analysers and that this may result in add-ons. It is yet to be decided how a hydrographic office will structure its ENC production and may vary by nation. Some hydrographic offices may wish to create an all-ENC portfolio within S101, and validation and convert back to S57, or the opposite. Automation of this conversion is in its research phase. Alternatively, a hydrographic office could hold their ENCs in both.

8.2 S100 Transition Roadmap

In the preparation of the meeting, France was asked by UK as Chair of SAIHC to present an update on its transition to S-100. Pierre-Yves Dupuy presented France's considerations and developments summarised by the below points:

- France supports, for the advent of S-100 products, the update of the IMO ECDIS Guidance & ECDIS Performance standards (resolution MSC.232(82)) led by the IHO secretariat;
- developing S-101 (ENCs), S-124 (warnings) and S-128 (catalogue for nautical products) appears as a priority;
- Shom intends to make available all the 900 FR ENCs in S-101 format as soon as the first ECDIS able to exploit S-100 products are available, i.e. from 2025 according the IHO S-100 roadmap;
- Shom intends to entrust to a third party (preferably the RENC PRIMAR) the availability of the FR S-57 ENCs when the FR 900 ENCs are available in S-101;
- With S-100, IHO has defined for data integrity and security, the IHO Data Protection Scheme (S-100 Part 15) in the context of reinforced consideration by IMO for cybersecurity. The limitations of ECDIS machines which justified the dissemination of non encrypted data for the S-57 ENCs (SENC format delivery) do no longer exist and Shom intends not to disseminate unencrypted data for FR S-101 ENCs;
- Shom participates in UKHO-Shom ECDIS System collaborative project and other innovation lab experiments;
- S-124 Navigational Warnings are in testing phase via the national PING system development.

10.1 Any Other Business (AOB)

France, Norway and UK confirm that they have arranged a date to begin planning the gap analysis workshop agreed in Action 5.

The Chair asked the floor for feedback on the hybrid format of the conference, but none was received. No other AOB was received.

10.2 Election of Chair and Vice Chair

The Chair expressed the UK's delight to continue as Chair of SAIHC unless any other Members would like to put themselves forward. Norway supported continuing with the UK and Mauritius team and no other nominations were received.

Decision 6: Chair UK and Vice Chair Mauritius to remain in their respective roles.

10.3 Review of Actions and Decisions

Secretary ran through the actions generated throughout conference and all were agreed. These can be found in **Annex A**.

10.4 Details for next meeting

Discussions were held to agree the date of the 19th meeting as 6-9 February 2023. This will be an intersessional meeting to take place in good time before Assembly. The full SAIHC19 plenary will take place later in the year, with September 2023 initially suggested. The Chair asked for nominations to host 2024 but there were no volunteers.

Decision 7: Mauritius to host SAIHC19 in late 2023, pending Government approval.

Action 21: SAIHC Secretary and Mauritius to agree a date and confirm venue for SAIHC19.

Closing remarks

Thoughtful gifts were exchanged between UK and Mozambique, France and Mozambique, our hosts, and from France to the Chair of the SAIHC. The Chair closed the meeting by thanking everyone for their cooperation in productive discussions, to the speakers for their interesting presentations and a very special thanks to our wonderful hosts. General Director Simiao Munguambe and his fantastic team worked tirelessly to make us feel welcome and to ensure a smoothly run conference.

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Annex A - SAIHC18 Actions

| No. | Reference | Action | Action By | Deadline |
|-----|-------------------------|---|--|---------------------------|
| 1 | SAIHC18-1.3 | Invite the Nairobi Convention to SAIHC19 to give a presentation brief | SAIHC Chair | SAIHC19 |
| 2 | SAIHC18-1.4 | Circulate the new approved Statutes and upload to the IHO SAIHC website | SAIHC Secretary | July 2022 |
| 3 | SAIHC18-2.3 | Complete a Gap Analysis for each goal in the IHO Strategic Plan 2021-2026 (or report on progress) | All MS | C-6 18-20 October 2022 |
| 4 | SAIHC18-4.0 | Circulate the SWPHC Gap Analysis template to MS | SAIHC Secretary | July 2022 |
| 5 | SAIHC18-4.0 | Plan and host a VTC Workshop to share experience of completing a Gap Analysis | France, Norway, UK | August 2022 |
| 6 | SAIHC18-3.1 MSDI | To approve amendment to ToRs of MSDIWG reflecting change in CSB/Seabed 2030 Coordinator role, as outlined in Annex A of MSDI Report | All MS | Closing Actions |
| 7 | SAIHC18-3.1 MSDI | All Member States to supply any further updates to report provided in April 22 to MSDIWG Chair (UK) | All MS | By SAIHC19 |
| 8 | SAIHC18-3.1 MSDI | Provide any feedback to the MSDI IGIF Maturity Roadmap quick start guide to MSDIWG Chair (UK) | All MS | SAIHC19 |
| 9 | SAIHC18-3.3 CB | Inform CB Coordinator of any wider CB opportunities that the SAIHC region can benefit from (also for inclusion in the IHO Calendar) | All MS | SAIHC19 |
| 10 | SAIHC18-3.3 CB | Consider contributing to the Empowering Women in Hydrography Project | All MS | 2023 |
| 11 | SAIHC18-3.3 CB | Review the SAIHC CB Workplan and consider the proposals for 2024 | All MS | Feb 2023 |
| 12 | SAIHC18-3.4 AGL&RSWG | Interim Chair to write letter to members to discuss and coordinate a Technical Working Group Meeting to Lakes | Interim Chair | July 2022 |
| 13 | SAIHC18-3.4 AGL&RSWG | SAIHC Chair to write letter to Government bodies of members to encourage sharing of data to support safety of navigation | SAIHC Chair | July 2022 |
| 14 | SAIHC18-6.0 | Contact Seychelles, Namibia, and Tanzania and ask them to produce a National Report that can be shared on the SAIHC webpage | SAIHC Secretary, Seychelles, Namibia, Tanzania | June 2022 |
| 15 | SAIHC18-7.1 | Send contact details to NAVAREA VII Coordinator to complete Annex D of Disaster Response Framework | All MS (except South Africa and India) | SAIHC19 |
| 16 | SAIHC18-5.2 CSB | Consider and update the SAIHC CSB Coordinator on any CSB activity in the SAIHC region. | All MS | SAIHC19 |

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|----|--------------------|---|-------------------------------|---------|
| 17 | SAIHC18-5.2 CSB | Member States not part of the CSBWG to consider joining and/or attending the CSBWG. | All MS | SAIHC19 |
| 18 | SAIHC18-5.2 CSB | Report the state of regional and national ocean mapping efforts to the SAIHC SCB Coordinator. | All MS | SAIHC19 |
| 19 | SAIHC18-5.2 CSB | SAIHC Members and Associate Members to contact SANHO to obtain data gatherers provided by NOAA to support data collection for seabed2030. | All MS | SAIHC19 |
| 20 | SAIHC18 | Chair to provide updates to IRCC14 on SAIHC18 attendance success, AGL&RSWG achievements and to support the use of Seabed 2030 coverage as an indicator for SPI 2.2.1. | SAIHC Chair | IRCC14 |
| 21 | SAIHC18-10.4 | SAIHC Secretary and Mauritius to agree a date and confirm venue for SAIHC19. | SAIHC Secretary, Mauritius | SAIHC19 |

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10-12 May 2022, Maputo, Mozambique

Agenda Item 6.2: National Report of France

Written Statement by the Republic of Mauritius

The Republic of Mauritius wishes to place on record its strong objection to France's claim in its National Report that the Island of Tromelin is a French territory.

The Island of Tromelin forms an integral part of the territory of the Republic of Mauritius and is not a French territory. The Republic of Mauritius has full and complete sovereignty over the Island of Tromelin, including its maritime zones.

The Republic of Mauritius rejects France's sovereignty claim over the Island of Tromelin and does not recognize the validity of the inclusion of the Island of Tromelin in the French Southern and Antarctic Lands (TAAF) or Iles Eparses.

The Republic of Mauritius requests that this statement be recorded in the minutes of the 18th SAIHC Conference.

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The French authorities do not recognise any legal value in the Mauritian declaration, which fails to consider that the Island of Tromelin is a French territory over which France has constantly exercised full and total sovereignty.

Thus, France enjoys sovereign rights or jurisdiction under international law in the exclusive economic zone adjacent to the Island of Tromelin.

SAIHC meetings are not the appropriate place to discuss territorial sovereignty issues, and French authorities will continue to hold constructive dialogue with the Republic of Mauritius on this matter.