

From: Peter Sparkes
Chief Executive UKHO and SAIHC Chair

SAIHC19 Letter No. 1/2023



3 February 2023

To: Members, Associate Members, and Observers of the IHO Southern African and Islands Hydrographic Commission (SAIHC)

Re: SAIHC19/ Report to Assembly

Dear SAIHC Colleagues,

As we start to look ahead and think about the next SAIHC, I want to express my sincere thanks to INAHINA for hosting last year's SAIHC18. It was without a doubt the best attended SAIHC thus far, enabling fruitful collaborative discussions during the plenary, working groups and margins.

We are very pleased to confirm that Mauritius will host SAIHC19; this will be held in late August, exact date is still to be confirmed by the Host.

I would like to share the draft SAIHC report, which will be submitted to IHO Assembly which is taking place 2-5th May 2023. I would be grateful for any comments and or feedback on the report (see Annex A). Please provide any feedback to the SAIHC report for Assembly to nicky.willoughby@ukho.gov.uk no later than the 17 February 2023. If you have not responded, I will assume that you are content with the draft and do not wish to make any changes.

There has been significant activity from the working groups this past year. In particular, the African Great lakes and Rivers Working Group (AGL&RsWG), generously hosted by Malawi, with funding from UK. This meeting, the 5th AGL&RsWG, enjoyed representation from Kenya, Malawi, Mozambique, Uganda, the United Kingdom and Zambia and it brought focus to our work key inland waterways. The hydrographic survey demonstration at Monkey Bay, funded by Kongsberg Maritime, really brought the groups initiatives to life.

We should also applaud the International Chart Coordination Working Group (ICCWG) for continuing to take forward this important work of addressing coverage and tackling Electronic Nautical Chart (ENC) overlaps, where possible.

The SAIHC Marine Spatial Data Infrastructure Working Group (MSDIWG) Chair has continued to engage with the International Hydrographic Organisation (IHO) MSDIWG, whilst monitoring developments under the UN Integrated Geospatial Information Framework (IGIF)-MSDI Maturity Framework and developing a 'quick start' guide to measure a nation's

maturity against the IGIF's nine strategic pathways. This was briefed during the AGL&RsWG in December and included discussions on data portal requirements.

Since we last met, two IHO funded Capacity Building (CB) activities have been completed within the region, notably the Technical Visits to Comoros and the United Republic of Tanzania. I would like to thank all stakeholders involved in these for their work. Looking ahead to this year, the CB coordinator is seeking to hold the IHO funded MSI course with the assistance of the Chair of the Worldwide Navigational Warning System (WWNWS), as a cross Regional Hydrographic Commission (RHC) initiative. It will be open to participation from SAIHC, North Indian Ocean Hydrographic Commission (NIOHC) and ROPME Sea Area Hydrographic Commission (RSAHC) representatives. This course will assist in building vital regional capability.

In the interim, I would like to wish everybody well and I look forward to seeing you either at IHO Assembly and/or SAIHC19, later in 2023.

Yours sincerely

A handwritten signature in cursive script that reads "Peter Sparkes". Below the signature is a horizontal line.

Rear Admiral (Retired) Peter Sparkes
Chairman Southern African and Islands Hydrographic Commission (SAIHC)

Annex A - Draft SAIHC Report for Assembly

Annex B - Working Group Reports

Annex C - SAIHC ICCWG Update Report (separate attachment)

Annex D - MSI-NAVAREA V Self-Assessment (separate attachment)

Annex A

3rd SESSION OF THE IHO ASSEMBLY

Monaco, 2-5 May 2023

REPORT OF THE SOUTHERN AFRICA AND ISLANDS HYDROGRAPHIC COMMISSION

1. **Chair:** Rear Admiral (Retd.) Peter Sparkes (UK)
Vice-Chair: Ms. Maheswaree Naraini Madhub (Mauritius)

2. **Membership:**

Members: Angola, France, Kenya, Mauritius, Mozambique, Norway, Republic of South Africa, Seychelles, United Kingdom

Associate Members: Comoros, India, Madagascar, Malawi, Namibia, Portugal, Tanzania

3. **Meetings:**

SAIHC17: 3 – 4 February 2021 by VTC

SAIHC18: 9 – 13 May 2022 in Maputo and VTC

African Great Lakes & Rivers Sub Working Group (AGL&RsWG): 5 – 6 December 2022 in Lilongwe, Malawi

SAIHC 19: August 2023

4. **Agenda Items:**

The main activities of the SAIHC align with IRCC guidance and the emerging priorities of the IHO. This includes discussions on ENC scheme options and the establishment of an active Marine Spatial Data Infrastructure Working Group (MSDIWG), led by UK. In addition, SAIHC has established a Crowd Source Bathymetry (CSB) and Seabed2030 Coordinator (South Africa) to address the significant challenge of improving data coverage in line with Seabed2030 goals.

Further to this, SAIHC has improved its focus around the Great Lakes and Rivers within this region. This has been taken forward through the formation of the African Great Lakes & Rivers Sub Working Group (AGL&RsWG).

In January 2021, a 2-day MSDI Awareness Training Course was conducted to increase and enhance the understanding of Marine Spatial Data Infrastructure (MSDI) and its relevance to national, regional, and global development success. The event was delivered virtually to maximise attendance.

A Hydrographic Awareness Seminar was delivered in May 2022 funded through the IHO Capacity Building Fund. The Seminar focussed on the need for Hydrographic Governance, the work of IALA and the IHO and its Strategic Plan. The Seminar raised awareness of the use of Strategic Performance Indicators and encouraged regional sharing of knowledge and resources to build capability.

5. **Difficulties encountered and challenges yet to be addressed:**

(Please list the significant difficulties encountered during the period, if any, and the challenges yet to be addressed)

Data collection in remote locations and the lack of data coverage to meet the Seabed 2030 goals remains a huge challenge for the SAIHC region. Many members find it challenging to unlock scarce resources to invest in hydrography.

The SAIHC community is at a varying level of technical maturity within the digital and S-100 space. The region will seek to address through collaborative initiatives and through the support of the IHO CB work.

6. **Achievements/outputs/conclusions:**

(Please list the significant achievements/outputs/conclusions reached during the period)

Since the last Assembly, the full membership of SAIHC has grown. New IHO members are Kenya and Angola. Working alongside the capacity building initiative of funding the Hydrographic Awareness Seminars (HAS), we have seen significantly increased engagement. This reached a milestone during SAIHC18, ably hosted by INAHINA in Maputo in May 2022, when we achieved the greatest ever SAIHC attendance. This included members attending for the first time, such as Uganda. The discussions were rich and varied, providing greater clarity on the needs and priorities of members.

There has been increased coordination activity within working groups. The MSDIWG has continued to provide online training and updates to SAIHC members on wider developments. In particular, the maturity roadmap of the IGIFs nine strategic pathways and the emerging 'quick start guide' have been a focus.

The African Great Lakes & Rivers Sub Working Group (AGL&RSWG) has achieved significant success, culminating with a hosted meeting and practical demonstration in Malawi, in December 2022. This meeting achieved representation from across the region and brought together government departments, port authorities and cross regional bodies. The working group activities continues to focus on a hydrography audit, development of a coordinated vertical datum for Lake Victoria, requirements for a data portal, and data sharing.

The ICCWG continues to coordinate the INT charting coverage and work to reduce ENC overlaps and gaps. The establishment of the CSB and Seabed 2030 coordinator provides a concentrated focus in conjunction with wider activity. This has included the presentation of the work of Seabed 2030 to the SAIHC.

Participants from the region have benefited from the support of the IHO Capacity Building Fund and the generous support of the donor organisations

- Mauritius successfully completed the Training for Trainers Programme in Basic Hydrography, sponsored by the Republic of Korea, in November 2021
- Seychelles attended the IHO – Nippon Foundation GEOMAC Project, successfully completing the course in December 2022.

The COVID pandemic has impacted the delivery of several planned face-to-face Capacity Building activities, but the improved global situation has enabled two Technical Assessment Visits to be completed in 2022 to the Comoros and the United Republic of Tanzania. These visits will support the development of hydrographic capability and have raised awareness at a policy level of the value of hydrography and its role in supporting a country's economy.

7. Actions required of the Assembly:

- a) **Note** the report of the SAIHC.
- b) **Take** any other action considered appropriate.

Annex B



SAIHC intersessional MSDIWG Report 2023



To: Members of the IHO Southern African and Islands Hydrographic Commission (SAIHC)

Subject: INTERSESSIONAL REPORT: MARINE SPATIAL DATA INFRASTRUCTURE (MSDI) WITHIN THE SOUTHERN AFRICAN AND ISLANDS HYDROGRAPHIC COMMISSION (SAIHC)

7th January 2023

Background, Introduction, and purpose

1. During SAIHC15, noting IHO activity under the IHO-MSDIWG, the Commission agreed to establish SAIHC-MSDIWG. UK was elected to chair this working group and compiled initial Terms of Reference (TORs) and Rules of Procedure (ROP), with input and support from the SAIHC group.
The purpose of this document is to provide a short report for the intersessional update of the Southern African and Islands Hydrographic Commission (SAIHC), as an output identified in the SAIHC-MSDIWG TORs. The report focusses on activity during and since SAIHC 18 with a look forward to SAIHC 19 MSDIWG, scheduled to convene in September 2023.

Current status of MSDI within SAIHC

2. The SAIHC MSDI Working Group has achieved some success in the provision of online training overviews and MSDI featured previously as a key part of the Hydrographic Governance Workshop. The working group has brought together Seabed 2030 and the IHO MSDIWG activity to inform SAIHC members of key initiatives, resulting in a common level of understanding.

As previously reported, there are several MSDI and Marine Spatial Planning (MSP) initiatives across the region that have been identified by SAIHC MSDI group. These are highlighted again, if members know of any further developments, please alert the MSDIWG:

- a. The Seychelles Marine Spatial Plan (MSP) Initiative – This is a process focused on planning for and management of the sustainable and long-term use and health of the Seychelles Exclusive Economic Zone (EEZ). The EEZ encompasses 1,374,000 km² of ocean and 115 islands. The MSP Initiative is a government-led process, managed by The Nature Conservancy (TNC) and TNC Canada in partnership with Government

of Seychelles – UNDP GEF Programme Coordinating Unit (PCU).

<https://seymsp.com/the-initiative/>

- b. Marine Spatial Atlas for the Western Indian Ocean (MASPAWIO) - An open access geospatial data repository for the Western Indian Ocean. MASPAWIO provides access to marine spatial datasets, providing data layers useful for marine spatial planning, management, and research, from multiple primary and secondary sources, contributing compiled information into other regional and global repositories. This initiative covers 11 key countries in SAIHC/NIOHC region. <http://maspawio.net/>
- c. African Coastal and Marine Atlas (ICAN) Has a functioning portal - <http://www.africanmarineatlas.org/>
- d. BIOPAMA - The BIOPAMA project aims to build a solid information base for decision making on protected areas in the Africa, Caribbean, Pacific (ACP) region. This repository, based on GeoNode, is part of the BIOPAMA Reference Information System. Here you can discover and use maps, reports, data, and other information sources, and upload your own to share with others. The themes of data you can find here cover a broad range of natural resource management and related topics. Core development is by the Joint Research Centre of the European Commission, based in Italy. Our project partners IUCN are working with regional institutions to set up Observatories, which will use GeoNode to help share important data.
- e. Nairobi Convention - Marine Spatial Planning Workshop Held at Kenya marine and fisheries research Institute (KMFRI). Held in September 2018. The aim of the workshop was to enhance capacity in science-based management tools such as Integrated Coastal Zone Management, Marine Spatial Planning, and the Large Marine Ecosystem Approach to promote better responses to challenges in coastal and marine environment. https://wedocs.unep.org/bitstream/handle/20.500.11822/26353/Marine_Spatial_Planning_Report.pdf?sequence=1&isAllowed=y

Note, the SAIHC WG has not received any updates since the previous report from member states. Therefore, this represents what was known during our previous meeting. Please provide any pertinent updates to the SAIHC MSDI WG Chair.

Current status of implementation within SAIHC

3. Members are encouraged to report MSDI implementation as part of their national report updates at the next SAIHC19.

IHO MSDI activities

4. Following a joint presentation with the World Bank Group (supported by the UK Geospatial Commission), and being sponsored by the IHO, OGC, and ISO at the *Twelfth Session of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM12)* in New York during August 2022, UKHO contributed the Lead Author of the IGIF-MSDI Maturity Roadmap (Dr Gerald J Wong) to a World Bank Group geospatial maturity assessment mission to the Republic of the Philippines in October 2022.

This contribution of marine and maritime expertise around an IGIF-aligned MSDI implementation greatly assisted World Bank understanding of the Philippines existing hydrographic strengths and areas where the World Bank could potentially finance future development. This mission also independently provided 3rd party “proof in practice” separate from the existing participants in the IGIF-MSDI Maturity Roadmap initiative: UN-GGIM, World Bank, IHO, OGC, UKHO, plus NOAA and MPA (as Co-Chairs of WG-MGI). UKHO is also contributing to the development of a draft Geospatial Use Case inventory for the Marine domain as part of the World Bank engagement in the Philippines.

For strategic context, the IGIF-MSDI Maturity Roadmap is intended as a complementary “Quick-Start” guide to the existing ecosystem of IGIF, MSDI, OGC, and National resources, providing a quantitative baseline of a nation (or agency’s) marine geospatial maturity and options for future development. It is fully interoperable with the World Bank’s NSDI related IGIF Methodology, which includes considerations of Socioeconomic Impact and Country Action Planning, as aligned with the wider UN-GGIM IGIF model.

The final document is presently within a review and approvals phase, although the UKHO is optimistic that a general release will be possible in time for UN-GGIM13 at the United Nations in New York during August 2023.

Training and Capacity Building requirements and opportunities

5. The SAIHC Capacity Building Coordinator (CBC) is optimising resources by developing a collaborative four-day MSI course in conjunction with NIOHC and RSAHC. At the time of publication of this report, the dates and venue are unknown, however this presents a terrific opportunity for SAIHC. Please provide your training and capacity building requirements relating to MSDI, either within the national report update, through the SAIHC Capacity Building Coordinator lucy.fieldhouse@ukho.gov.uk or direct to SAIHC MSDI WG Chair Tim.lewis@ukho.gov.uk

Related MSDI activities and successes

6. SAIHC MSDI WG Chair has been working closely with the African Great Lakes & Rivers Sub-Working Group (AGL&RsWG) since SAIHC17. We recently held a successful two-day meeting, hosted by Malawi. This was attended by six SAIHC nations and included wider regional organisations. SAIHC WG Chair briefed the group on MSDI activities, in particular developments to the Integrated Geospatial Information Framework (IGIF)-MSDI Maturity Framework and “quick start” guide in measuring a nation’s maturity against the IGIF’s nine strategic pathways.
7. SAIHC MSDI WG Chair also referred back to MSDI WG Letter 2/2021 regarding data portal requirements for the group. This will be a focus of discussion at the AGL&RsWG during SAIHC19.

Future initiatives

8. The Integrated Geospatial Information Framework (IGIF)-MSDI Maturity Framework is being developed in conjunction with the UN, IHO, Open Geospatial Consortium (OGC) and World Bank, with representation from (IHO MSDI WG Chair), Singapore (IHO MSDI WG Vice-Chair, UN WG- Marine Geospatial Information (MGI) Co-Chair), and the United States (UN WG-MGI Co-Chair).
9. As a compact and accessible document, its intent to provide a more quantitative and prescriptive “Quick Start” or “Stepping Stone” for nations beginning their IGIF-aligned MSDI implementation plans. The quick start guide is still in development however it is hoped to be available by SAIHC19. The current World Bank SDI Diagnostic Toolkit with

its proven Terrestrial heritage is being augmented with IHO and OGC insights to maximize its benefits to the Marine community, whilst being aligned with the UN IGIF principles and United Nations Sustainable Development Goals (UN SDGs) as a result. The involvement of the World Bank is crucial in providing answers to the funding question (including business cases), alongside Why (UN), What (IHO), and How (OGC).

Actions and next steps for SAIHC 19

10. SAIHC next steps will be discussed and developed during the SAIHC 19 MSDIWG meeting.

11. Actions: SAIHC members are invited to:

- a. Note this short intersessional MSDI report,
- b. Consider and update the WG on any MSDI activity in the SAIHC region,
- c. Provide requirements for data portal through the African Great Lakes & Rivers Sub-Working Group.



**SAIHC intersessional AGL&RsWG
Report 2023**



Annex B

To: Members of the IHO Southern African and Islands Hydrographic Commission (SAIHC)

**Subject: INTERSESSIONAL REPORT: AFRICAN GREAT LAKES AND RIVERS
SUB WORKING GROUP**

11th January 2023

Background, Introduction, and purpose

1. Established at SAIHC17 as a sub working group of the ICCWG with the aim of giving focus to the regions significant inland water ways. Recognising the specific challenges which deserve focused recognition and discussion. The group is open to members, associate members, observers, and industry with an interest in Lake Hydrography. UK are interim Chair and the group has steadily grown and now has representation from across the region including government departments, port authorities and cross regional bodies. The purpose of this document is to provide a short report for the intersessional update of the Southern African and Islands Hydrographic Commission (SAIHC), as an output identified in the SAIHC AGL&RsWG TORs. The report focusses on activity during and since SAIHC 18 with a look forward to SAIHC 19, scheduled to convene in September 2023.

Current status of AGL&RsWG within SAIHC

2. The group held its 5th meeting in Malawi in December 2022. Hosted by Malawi's Department of Surveys and with delegates from Kenya, Malawi, Mozambique, Uganda, United Kingdom, Zambia, Port Management Association of Eastern & Southern Africa (PMAESA), Lake Victoria Basin Commission (LVBC) and Regional Centre for Mapping and Resources for Development (RCMRD). This was the group's first entirely face to face meeting which proved the perfect platform for vibrant deliberations and engagement.
3. Day 1 plenary featured delegates presentations followed by discussions on the following topics with specific reference to inland waters:
 - a. MSI
 - b. Hydrographic surveys and Understanding Water levels.
 - c. User requirements, Lakes & Rivers charting now and in the future.
 - d. Data sharing
 - e. MSDI

4. Day 2 featured an MBES demonstration by SAIHC industry GeoSystems, generously funded by Kongsberg Maritime onboard Malawi's hydrographic vessel 'Timba' at Monkey Bay. Geosystems fitted the MBES EM 3002 onto Timba enabling practical demonstration and data collection. The demonstration featured a step-by-step summary of the equipment, its set up and calibration, deployment of SVP and the data collection. Malawi were able to showcase their hydrographic vessel, hydrographic team and share their expertise with the group.

Outcomes and Future initiatives

5. Ongoing activities of the group to include:
 - a. Hydrography Audit, each nation requested to complete the audit which covers hydrographic surveys, charting, resource and MSI.
 - b. Development of coordinated vertical datum for Lake Victoria. To include an understanding of the impact of significant variations in water levels.
 - c. Continued consideration of requirement of data portal to support awareness, coordination, planning and sharing of hydrographic information and potential for this to be hosted in region.
 - d. Investigate feasibility of satellite derived bathymetry, its uses in region and potential resource within the group.
 - e. Support and promote data sharing within the region to enable the development and ongoing provision of navigational products.
6. A VTC meeting will be scheduled for March 2023 for the AGL&RsWG 6th meeting.

Actions and next steps for SAIHC19

7. Actions: SAIHC members are invited to:
 - d. Note this short intersessional AGL&RsWG report,
 - e. Consider and update the WG on any further activities for consideration.