**20th South West Pacific Hydrographic Commission Meetings (SWPHC20)**

**Draft Minutes**

**1-Day SWPHC20 Pre-Meeting (p1-5)**

**14 February 2023 – VCT (Wellington, NZ)**

1. **Opening**

The Chair (Mr Adam Greenland) opened the meeting with a te reo Maōri non-denominational blessing (karakia) and introduced himself. The Chair then invited all participants to introduce themselves to the group.

Mr Greenland clarified the purpose of this online pre-meeting ahead of the face-to-face 3-Day SWPHC20, and reminded participants that some of the discussion and actions would carry over to the 3-Day meeting.

1. **Green shipping lanes/emission reduction/cyber security**

Doc: [presentation](https://iho.int/en/swphc20-2023) & [recording](https://youtu.be/uyGpQonbVJ8)

Lt Cdr Nelson McMillan (UK) presented on maritime cybersecurity, as a result of IRCC14 Recommendation 3: invite SWPHC to investigate possibilities to organize a workshop on environmental emissions from shipping (COP26 outcome) and on Cyber Security to MS and to liaise with the HSSC to provide contents.

The presentation began with a poll of participants on how often cybersecurity was discussed and if organisations had a cybersecurity board plan or strategy in place. Lt Cdr McMillan commented that the poll results mirror that of international studies.

Lt Cdr McMillan gave an overview and examples of the cyber risks in the maritime domain, including by mal and ransomware. Cybersecurity is about more than protecting data, it can be a danger to life at sea. As cyber incidents are caused by human error, executives and leaders should set the mindset of protecting and investing in cybersecurity.

IHO Director, Mr Abri Kampfer, confirmed that S-100 is looking into cybersecurity and does include check lists. ECDIS involves hard and software vulnerabilities.

Lt Cdr McMillan further explained the concept of stress testing which entails running though scenarios with systems and analysing the results. He concluded that there is need to understand hydrographic vulnerabilities and priorities; stress-test cybersecurity strategies; invest in cybersecurity training; and collaborate at local, national and regional levels.

**Decision 1:** To note the presentation on an overview of marine cyber threats.

1. **UNGGIM Integrated Geospatial Information Framework (IGIF-H) – Implementation case studies**

Doc: [presentation](https://iho.int/en/swphc20-2023) & [recording](https://youtu.be/lQRWnxbO8gY)

Ms Kathrine Kelm, World Bank (WB) welcomed the opportunity of speaking to the hydrographic community as the World Bank is recognising the importance of integrating the land and marine domains. Ms Kelm’s presentation focused on building partnerships and understanding how the World Bank works, as well as other International Financial Institutions or Multi-lateral Development Banks such as the Asia Development Bank. Ms Kelm explained how the World Bank works with countries on their investments and grants and recognised the challenge in securing investment in spatial data infrastructure.

The commission was reminded that World Bank Group’s Open Learning Campus has freely available online self-paced courses.

Mr Andy Coote of ConsultingWhere spoke about the use case from the Philippines with integrated land and marine management. Mr Coote highlighted examples from various countries and quantifiable benefits to convince economists and Ministers of Finance of the need for the long-term investment.

Dr John Nyberg (US) spoke to the supplement to the IGIF, the IGIF-Hydro to be endorsed later in the year. Dr Nyberg gave accolades to Mr Tion Uriam on working together on Kiribati’ IGIF stakeholder workshops and the implementation plan and reflected on the lessons learnt.

**Decision 2:** To note the presentation on UNGGIM Integrated Geospatial Information Framework (IGIF-H) – implementation case studies.

1. **Highlights of Hydrographic Services and Standards Committee (HSSC14)**

Doc: [presentation](https://iho.int/en/swphc20-2023)

Mr Julien Simon (FR) presented a summary of the IHO Strategic Plan SPI’s allocated to HSSC, and the progress of the development of S-100 components.

**Decision 3:** To note the report of the highlights of HSSC14 and recommendations.

**Decision 4:** To note the important challenges on the S-100 implementation and the commitments towards IMO and IEC.

**Action 1:** Member States are encouraged to actively support the development of S-100 priority Products.

1. **Highlights of Inter-Regional Coordination Committee (IRCC14)**

Doc: [presentation](https://iho.int/en/swphc20-2023)

Mr Greenland (NZ) presented a summary of the IRCC14 meeting and the workshop on the Strategic Plan, prior to the main meeting. The IRCC14 actions and decisions which were relevant to SWPHC were highlighted.

**Decision 5:** To note the report of the highlights of IRCC14 and recommendations.

1. **IRCC14 Substantive Papers (IRCC14-09B)**

Doc: [SWPHC - Paper on raising awareness of hydrography and open data](https://iho.int/uploads/user/Inter-Regional%20Coordination/IRCC/IRCC14/IRCC14-09B_SWPHC_paper_on_raising_awareness_of_hydrography_and_open_data.pdf)

Mr Greenland shared the paper as submitted to IRCC14.

**Decision 6:** To note the SWPHC paper on raising awareness of hydrography and open data.

* 1. **European Partnership - example of IHO-EU Network**

Doc: [presentation](https://iho.int/en/swphc20-2023)

Mr Simon (FR) gave an overview of the objectives and work of the European Network led by the IHO -European Union. The Memorandum of Understanding (MOU) between the IHO and the EU was provided as an example of what could be possible for the Pacific region. Mr Simon then provided a regional example of sharing data through a SHOM hosted data portal.

**Decision 7:** To note the presentation on European Partnership – Example of IHO-EU Network.

1. **Benefits of the S-100 related products**

Doc: [presentation](https://iho.int/en/swphc20-2023)

Mr Leonel Manteigas (IHO Assistant Director) presented on the Universal Hydrographic Data Model S-100: Benefits of the S-100 Related Products. The presentation included an overview of the IHO; the evolution of the representation of the maritime environment; S-100 products; the transition from S-57 to S-100; and the benefits of S-100 related products. In concluding, Mr Manteigas stated that S-100 is a revolution for the international maritime community; S-100 provides a complete 4D picture of the marine environment; S-100 development is happening with all maritime stakeholders; stressed the paramount role of the IHO and Hydrographic Offices; and that the use of S1-00 will improve the protection of the marine environment.

**Decision 8:** To note the presentation on The Universal Hydrographic Data Model S-100: Benefits of the S-100 Related Products.

1. **Update on Strategic Performance Indicators (SPI)**

Doc: [presentation](https://iho.int/en/swphc20-2023)

Mr Stuart Caie (NZ), Chair of the SWPHC SPI Sub-group to the SWPHC Work Plan & Priorities Working Group gave an update on those SPIs assigned to Regional Hydrographic Commissions. Following the approval of a proposal from IRCC14 that the responsibility for these SPIs be passed to the IHO Secretariat, Mr Caie recommended that the SPI Sub-group be dis-established.

**Decision 9:** To note the report on the update on Strategic Performance Indicators (SPI)

**Decision 10:** Agree that the SWPHC Strategic Performance Indicators (SPI) Sub-group is dis-established

1. **Highlights of MSDIWG13 & 14**

Doc: N/A

Chair of MSDIWG was not available to present the report. This was carried over to the 3-Day meeting.

1. **Highlights of report on GDMSS, MSI and NAVAREA Coordination (X, XI and XIV)**

Doc: [SWPHC20-10B](https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/SWPHC/SWPHC20/SWPHC20_2023_10B-NAVAREA_X_Report.pdf) and [SWPHC20-10D](https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/SWPHC/SWPHC20/SWPHC20_2023_10D_NAVAREAXIV_Report.pdf)

NAVAREA X

Mr Stuart Shepard (NAVAREA X Coordinator) presented the NAVAREA X report which should be read in conjunction with the annual report submitted to the WWNWS-SC meeting of September 2022. Mr Shepard confirmed that the National MSI Coordinators within the NAVAREA X region have been consulted on the information and contact details checked. Mr Shepard noted the NAVAREA X report contains number of warnings broadcast and their size which is tracked by the IHO and IMO and is useful in demonstrating the cost to MSI providers for delivering the service. NAVAREA X remains on trial with the Iridium SafetyCast services and hope to be operational by mid 2023.

Mr Shepard advised that the NAVAREA X & XIV Coordinators are working with the SWPHC CB coordinator and Fiji to hold an MSI training course to be delivered by Fiji MSI Coordinator and NAVAREA X & XIV Coordinators.

An IMO Circular Letter (Circular Letter No.4689) has been issued for Member States to consider the efficacy of the Global Integrated Shipping Information System (GISIS) and Mr Shepard invited IMO Member States to review and contribute as required

NAVAREA XIV

Mr David Wilson presented the NAVAREA XIV report, with confirmed contact details with those countries within the area. A significant number of warnings issued this year, many for rocket launching and space debris which has initiated a WWNWS Space Activity Working Group, co-coordinated by NAVAREA IV/XII and XIV.

The response to the Tonga volcanic activity in September 2022 was a good example of cooperation between national and international agencies. Information from the Tongan Volcanic Observatory was passed to the Tonga National MSI Coordinator who passed it on to the NAVAREA XIV Coordinator for promulgation. This has led to the creation of a WMO Task Team on Volcanic Activity and Safety of Marine Navigation which is being co-coordinated by NAVAREA XIV and METAREA XIV coordinators.

Mr Wilson advised that Maritime New Zealand is developing a user interface to enable broadcasting navigational warnings and SAR via Inmarsat and Iridium. Testing is expected to commence end February2023 and implement a minimum viable product by April 2023.

Mr Adam Greenland asked how the NAVAREA Coordinators are progressing with the development of S-124 Navigation Warnings. Mr Wilson advised that both NAVAREA X and XIV are members of the WWNWS-SC S-124 Project Team. The Project Team is happy with how the information is represented on the vessel and how it will be encoded on the shore-side. The issue is how the information will be delivered to the vessel, which needs to be addressed by the IMO.

Mr Greenland then sought confirmation that NAVAREA Coordinators are reporting to the IMO Secretariat and the Chair of the EGC Coordinating Panel on the progress and status of implementation of newly recognised mobile satellite services by MSI providers (IRCC14 Recommendation 5). Mr Shepard confirmed that NAVAREA X has updated their status in the IMO GISIS and provided a link to the IHO [Iridium SafetyCast Implementation Status](https://iho.int/en/iridium-safetycast-implementation-status) web page. Mr Wilson confirmed that NAVAREA XIV has been operational on all recognised mobile satellite service providers since February 2021 with all NAVAREA XIV warnings broadcast via Inmarsat and Iridium.

**Decision 11:** To note the reports from the NAVAREA Coordinators (X and XIV).

1. **Empowering Women in Hydrography**

Doc: [presentation](https://iho.int/en/swphc20-2023) & [recording](https://youtu.be/P6k3fltDuwg)

Mrs Hilary Thompson (AU), Chair of the SWPHC Work Plan & Priorities WG presented an overview of the activities to empower women in hydrography in the South West Pacific, including the Women in Hydrography Network. The Network has 52 members from countries in the region or working in the region. Mrs Thompson presented on why the network was started, outlining what participants wanted from the network and what they can give to it. Two virtual meetings have been held to-date, one to identify topics for the 3-Day SWPHC20 and the other to discuss the article [“The Power of Talk: Who Gets Heard and Why”](https://hbr.org/1995/09/the-power-of-talk-who-gets-heard-and-why). Topics for the 3-Day SWPHC20 meeting will cover Pathways into Hydrography; different roles in Hydrography; and the benefits to a diverse workforce.

Mrs Thompson ended with a request for the participants to consider what work is being done to empower women in Hydrography. This will form a regional response to the IHO before the 3rd Assembly; and to be an ally for women in their organisations to support, encourage and provide opportunities for women to join the profession and progress.

**Decision 12:** To note the presentation on Empowering Women in Hydrography SWPHC report.

1. **Hydrographic Leaders Programme**

Doc: [presentation](https://iho.int/en/swphc20-2023) & [recording](https://youtu.be/y9_SmKAz9I0)

Mr Nicolas Pion (PG), participant in the Hydrographic Leaders Programme, presented an overview of the Programme and what the session on Challenges Faced by Pacific Island Nations the group are hosting at the 3-Day SWPHC20 will entail.

**Decision 13:** To note the presentation SWPHC Hydrographic Leaders Programme – Challenges for Pacific Island Nations.

1. **Pacific Regional Maritime Transport Officials**

Doc: presentation

Mrs Hilary Thompson (AU) gave an overview of the Pacific Regional Maritime Transport Official meeting held in November 2022 and the [paper](https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/SWPHC/Events/Item4i-IHOStrategicPlan2021-2026and_SWPHC_Work_Plan.pdf) presented on the IHO Strategic Plan and the SWPHC Work Plan. This meeting links to a number of activities of the SWPHC Work Plan. The paper focused on engaging and collaborating with IHO, IMO, IALA and regional partners to *deliver as one* future Safety of Navigation services in the Pacific region and recommended the meeting to support the activities of the IHO Strategic Plan and SWPHC Work. SWPHC will be presenting to the Pacific Regional Energy and Transport Ministers Meeting in May 2023.

**Decision 14:** To note the presentation on the Pacific Regional Maritime Transport Officials meeting Nov 2022.

1. **Hydrographic Governance Workshop Gap analysis prep**

Doc: [presentation](https://iho.int/en/swphc20-2023)

Mr Stuart Caie (NZ) presented on behalf of the SWPHC CB Coordinator, Mr Matt Borbash, an overview of the gap analysis requested of workshop attendees and the intent of the workshop.

1. **Close**

The Chair has had engagement with IMO regarding attendance SWPHC20, which they will do online. IMO have confirmed they will have a regional office in the SWP.

The meeting closed with a karakia.

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**20th South West Pacific Hydrographic Commission Meetings (SWPHC20)**

**Draft Minutes**

**3-Day SWPHC20 Meeting (p6-26)**

**22-24 February 2023 – Wellington, NZ**

# Opening Remarks

## Welcome address by the Chair of the SWPHC

SWPHC Chair, Mr Adam Greenland (LINZ) welcomed participants to this first in-person meeting for three years. He urged attendees to support the work to deliver to the IHO Strategic Plan. The Chair reminded participants of the reporting that took place at the Online Pre-Meeting, and the introductions there to many of the topics discussed over the next three days. The Chair reminded participants to invest in the meeting to make it count for their region.

## Address by Minister for Land Information, Hon. Damien O'Connor

Minister for Land Information, Hon. Damien O’Connor addressed the Commission via video address, congratulating the commission on their successes over the past years including with the Hydrographic Leaders Programme supporting leaders to engage internationally. He concluded with encouraging collaboration and partnerships for the lasting benefits of the region.

## Address by the IHO Director

Mr Leonel Manteigas (IHO Secretariat) thanked the dignitaries and extended his personal greetings and those of the IHO Secretariat to those attending the SWPHC meeting.

Mr Manteigas noted the special significance to the region, Coastal states and the IHO of meeting together, in-person. Due to Covid-19 pandemic and changes in representatives, so this is the first time some people have met in person.

Encourages the commission to take note of key activities of regional and international significance to the hydrographic and maritime community, such as the implementation of S-100 Roadmap; the IHO renewed commitment to the UN Decade of Oceans; the hydrographic Capacity Building programme; and the IHO/Nippon Foundation Seabed 2030 project.

Mr Manteigas closed by wishing all participants a successful and fruitful meeting, in anticipation of the 3rd IHO Assembly in May 2023.

# Introductions

The Chair requested all participants both in person and online to introduce themselves to the meeting.

# Approval of Agenda

Doc. SWPHC20-03

The Chair introduced the Provisional Agenda and invited comment before adopting the agenda. The Chair suggested an additional presentation on S-100 from John Lowell (US). The Chair also asked participants to consider the election of the Chair and Vice-Chair.

**Decision 15:** To approve the agenda of SWPHC20

# Approval of Minutes of SWPHC19 Meeting

Doc SWPHC20-04

The draft minutes of SWPHC19 had been circulated to the participants and is available on the website. As no comments were received these were adopted as the approved (final) version.

**Decision 16:** To approve the minutes of SWPHC20.

# Matters arising from Minutes of SWPHC19 Meeting

Doc SWPHC20-05

Referring to the list of actions from SWPHC19, the Chair stated that some actions were complete, and the remaining were ongoing issues which will continue to be discussed at the Commission meetings and actioned as appropriate.

The Chair and action owners provided updates on the status of the actions as indicated in red below.

| **No** | **Agenda Item** | **Action** | **Responsible** | **Deadline and****Status** |
| --- | --- | --- | --- | --- |
| 1 | 4 | Liaise with IMO, IALA and SPC to encourage Coastal states that are not yet Members to join the SWPHC | Chair | Permanent |
| 2 | 4 | Consider identifying opportunities in national/regional/international donor agencies to incorporate hydrography in development projects. | All members | Permanent |
| 3 | 4 | Review their entries in the IHO Yearbook (P-5) and Status of Hydrographic Surveying and Charting Worldwide (C-55) and to provide the IHO Secretariat with the appropriate updates or to report no change. | All members | Permanent |
| 4 | 4 | Consider submitting papers for publication in the International Hydrographic Review. Submissions to Elizabeth de Bol (elizabeth.debol@defence.gov.au) IHR Regional Representative by July / January. | All members | Permanent |
| 5 | 4 | Standardise MSI reporting template for RHCs via National Reports to reflect changes in service providersTemplate under review by WWNWS Document Review Working Group | IHO Secretariat | SWPHC21 |
| 6 | 4 | Members to provide images to the Seabed2030 [Image Stream](https://seabed2030.org/seabed-2030-image-stream)  | All | Permanent |
| 7 | 4 | Members to provide bathymetric data to the Seabed2030 Project using the [Contributing data](https://www.gebco.net/about_us/contributing_data/) form. | All | Permanent |
| 8 | 4 | IHO Members to review their policy on data release and consider submitting a positive response to CL 21/2020(IHO CSB Data for Public Domain) | IHO Members | SWPHC21 |
| 9 | 4 | Non-members (IHO) to review their policy on data release and consider submitting a positive response to IRCC CL 01/2020(IHO CSB Data for Public Domain) | Associate Members, Observer States and other Coastal States | SWPHC21 |
| 10 | 4 | Coastal states to identify points of contact and means of communications for the SWPHC Disaster Response Framework. | TO, TK, TV | By June 2023 |
| 11 | 4 | SWPHC WG to review the SWPHC Disaster Response Framework, to produce a ‘redline’ version and distribute to Members | NZ (lead), FJ, US | By June 2023 |
| 12 | 6.1 | SWPHC is invited to encourage and propose to the IHO Secretariat High Level visits to those States not yet IHO Member States | Chair | SWPHC21 |
| 13 | 6.1 | Members are encouraged to participate in the Empowering Women in Hydrography project. | All | Permanent |
| 14 | 6.1 | Members are invited to provide contributions for the IHO e-Learning Centre at KHOA | All | SWPHC21 |
| 15 | 6.2 | SWPHC to consider extending the role of the Charting Regional Coordinator for the implementation of the S-100 Implementation Roadmap. | ICCWG | Agenda item 21.1complete |
| 16 | 6.2 | SWPHC to coordinate the efforts on the implementation of S-100, promote the cooperation and exchange of experiences, and identify CB requirements. | ICCWG | Agenda item 21.1complete |
| 17 | 6.2 - 6.3 | SWPHC to include the measurement of the SPI attributed by IRCC and HSSC in their annual Work Plans. | Work Plan WG | complete |
| 18 | 6.3 | Members are encouraged to participate in the new HSSC Project Teams i.e., Baseline Symbology (subWG of NCWG) to support the automated production of paper charts from S-101 data. | All | complete |
| 19 | 6.4 | SWPHC to consider role of regional charting coordinator to include S-1xx Products as RHC WEND Coordinator. | ICCWG | Agenda item 21.1complete |
| 20 | 8 | SPC to invite SWPHC Chair and IHO Sec-General/Director to the next meeting of the Pacific Regional Energy and Transport Ministers Meeting. | SPC | May 2023 |
| 21 | 8 | IHO and SWPHC to engage with new IMO regional representative. | ChairIHO Secretariat | SWPHC21 |
| 22 | 8 | SWPHC to engage with SPC to develop a consistent and coordinated approach to safety of navigation in the Pacific, between countries and interested partners and to engage with IMO through Pacific position papers and formal requests for support.  | Chair, SPC, Members, Coastal States | SWPHC21 |
| 23 | 9.2 | Members are encouraged to join the SWPHC MSDIWG. | All | complete |
| 24 | 12.2 | Members to provide feedback on the Draft ToR and RoP of the SWPHC Work Plan & Priorities WG to the WG Chair. | All members | complete |
| 25 | 12.2 | Members to provide feedback on the SWPHC Draft Work Plan 2022-2024. | All members | complete |
| 26 | 12.5 | Host an intersessional workshop for the SWPHC on *S-100 and you – the impact of S-100 on all nations.* | US, CB Coordinator | complete |
| 27 | 13.2 | Host an intersessional workshop on the IGIF-H for the SWPHC to raise awareness and lead the adoption of the framework by Coastal states in the region. | MSDIWG, CB Coordinator | Agenda item 16complete |
| 28 | 13.3 | Develop an open data value proposition for the region through collaboration with international/regional actors. | MSDIWG (lead), SPC | Agenda item 21.2complete |
| 29 | 14.1 | Share Pacific Resilience Project LiDAR data (MH, TO, VU) with charting authorities. | SPC | Q1 2023 |
| 30 | 15.3 | SWPHC to consider initiatives in support of the UN Decade.  | AllWork Plan WG | complete |
| 31 | 15.3 | Members to register to attend virtual labs for UN Decade.  | All | complete |
| 32 | 15.3 | Members to consider submitting a concept note to participate in up-coming International Virtual Ocean Decade Laboratories | All | complete |
| 33 | 16.2 | Host an intersessional, regional Seabed 2030 webinar | SWPHC CSB /Seabed 2030 Coordinator, IHO DCDB Director, CB Coordinator | complete |
| 34 | 16.2 | Members are encouraged to participate in regional CSB activities | All | SWPHC21 |
| 35 | 19.2 | SPC to make available SoN Project AtoN Risk Assessment report for Tonga to NZ. | SPC | complete |
| 36 | 20 | Items to be raised at IRCC14 for discussion at 6th Council Meeting (C6) | Chair | complete |
| 37 | 21 | Members to consider producing content for WHD 2022 | Chair | complete |
| 38 | 25 | NZ to confirm hosting of SWPHC20 in NZ in February 2023 | NZ | complete |

Participants updated the actions list and agreed on new deadlines.

SWPHC19 Action 8 & 9: AU & FR confirmed they had now responded positively. The UK advised that their CSB Policy is currently at Ministerial level.

SWPHC19 Action 10: FR have now submitted contact details.

# SWPHC Statutes

No discussion required.

# IHO Secretariat Report

Doc SWPHC20-07

Mr Leonel Manteigas (IHO Secretariat) presented the IHO Secretariat Report which included:

* IHO Membership and regional application for IHO membership, encouraging the SWPHC propose to the IHO Secretariat high level visits to those States not yet IHO Member States.
* The outcomes of the 6th Council meeting and the recommendations that the SWPHC support the IRCC in identifying measures and values to measure those SPIs of regional interest allocated to IRCC, and to consider providing their CATZOC values - through the RENCs - to support the IHO Secretariat in the process of measuring SPI 1.2.2.
* Preparation for the 3rd IHO Assembly and encouraging recent Member States to present their flag to the Assembly. It was noted that the Assembly is in-person only and Member States are encouraged to register on-line. The Chair also encouraged recent Member States – Samoa, Solomon Islands and Vanuatu – to attend in-person. However, if unable able to attend, to consider a delegation from the nations embassy to attend. The US advised of an exhibit, *Science on a Sphere,* that will show images related to hydrography. Participants were encouraged to provide images or contribute data that can be displayed. The UK sought clarity on the opportunity for the Assembly to be held on-line, noting that some Member States may not be able to travel and make representation from the region. Mr Manteigas confirmed that there are no plans for on-line participation. Following further discussion, a decision was made to support a representation to the IHO to allow on-line participation to enable a more inclusive and broader participation. [Draft text is included at the end of this item].
* An update on the IHO Capacity Building (CB) Programme and activities, noting that IHO CB funded activities in the region have carried over from previous years. With regards to other non-IHO CB funded activities, the Chair reminded Members of the benefits for participants and that many of these courses are held annually which may provide time for potential students to gain the necessary requirements to attend.
* Encouraging Coastal states to provide a positive response to IHO CL21/2022 and IRCC CL 01/2020 for the provision of CSB.
* An announcement that the Nippon Foundation GEBCO-Seabed 2030 Project was endorsed an Action of UN Decade of Ocean Science for Sustainable Development.

**Decision 17:** To note the IHO Secretariat Report and recommendations.

**Action 21:** Make a representation on behalf of the SWPHC to the IHO SG requesting and requiring provision for mechanisms to ensure greater inclusion and participation of SWPHC Member States at IHO meetings, in particular the IHO Assembly.

Draft text for representation to IHO Secretary General regarding attendance and participation at the 3Rd Assembly of the IHO.

1. The South West Pacific Hydrographic Commission welcomed the support of the Capacity Building Fund which enabled greater participation from across the region in the 20th Commission meeting held in Wellington, New Zealand, February 2023.
2. The South West Pacific Hydrographic Commission will continue to encourage IHO membership for Coastal states in the region.
3. Recognising that travel to Monaco from the South West Pacific region can be prohibitively costly, the Commission understands that funds will not be made available by the IHO to enable in-person participation at the A3 Assembly.
4. Whereas not all IHO Member States will be able to travel and participate in the IHO A3 Assembly, **the Member States of the South West Pacific Hydrographic Commission resolved that:**
	1. every provision should be made to allow all States to enjoy the benefits of their membership of the IHO and to join and participate so far as possible through appropriate mechanisms.  This is important given that the IHO Assembly takes place only once every three years.  The South-West Pacific Hydrographic Commission has made inclusion and representation the core of its work plan and we request, and IHO Member States require, the IHO to do the same.
	2. Failure to support mechanisms for remote participation reduces the opportunity for diversity and inclusion in the hydrographic community.
	3. Failure to support mechanisms for remote participation excludes Member States from their rights and duties as IHO Member States.  These are important membership rights which include the right to comment, vote and contribute to discussions on the IHO’s work and priorities.

# National Reports and Presentations

Docs: SWPHC20-07B to 07U

The Vice Chair, Lt Cdr Jervis Robinson, invited States to present their National Reports.

Australia

* HIPP - Initial Operating Capability achieved, Full Operating Capability targeted for 2023.
* HydroScheme 2022 underway, details of current and past HydroScheme activities are published on the AHO website at <http://www.hydro.gov.au/NHP/>as Story Maps
* Work completed on an online ChartScheme application that depicts where and when chart updates will take place
* AHO personnel attended the Solomon Islands Maritime Authority (SIMA) Navigation Safety Planning and the Tripartite meeting between AHO, SIMA and Japan International Cooperation Agency (JICA) in Honiara, Solomon Islands
* Supporting Fiji Hydrographic Service with a technical assessment to determine baseline capability assessment.
* Australia is the current Chair of the SWPHC MSDI WG.
* Continue development of S-100 based products and services through key findings of Project Muru which will detail AHO S-100 implementation.

Fiji

* Have a dedicated team for maintenance of vessels for the provision of surveys.
* Thanked AU for support for the survey vessel.
* Large area of Fiji requires re-survey so looking to remediate that
* Planning to release 4 new charts in the coming months, at least 2 produced in-house.
* Multiple CB undertaken and also looking for more opportunities.
* Development of a strategic plan
* Formation of a National Hydrographic Coordination Committee
* Restructure of the Fiji Hydrographic Service – hydrography, cartography, oceanography and data management
* Construction is underway for a new facility, Maritime Essential Services Centre.

France

* A number of surveys conducted around New Caledonia (NC) and French Polynesia (FP)
* LiDAR surveys in FP is pending approval and consideration for similar work in NC.
* 2023 will see the French Navy new patrol boat *Auguste Benebig* allocated to Noumea.
* France has responded positively to the CL on CSB . CSB data is passed to European Marine Observation and Data Network (EMODnet) and IHO DCDB
* Development of SDB project, Bathysat which will be operational at the end of 2023.
* Continue to work through the S-100 solution in collaboration with the UKHO.
* French National Nautical Information Platform (PING) is producing and broadcasting navigation warnings and will be operational in the SWP region next year.

New Zealand

* Rebranded charts for Samoa and Tonga published.
* Produced the first official high density ENC (hdENC) in conjunction with the Port of Napier.
* Collaboration between NIWA-Nippon Foundation to map the seabed following the Tonga volcanic eruption.
* Collaborating with other NZ agencies to test the value of a cloud-based datamesh.
* Challenges with Maritime Digital Transformation, in particular adequate resourcing to deliver S-100 implementation roadmap and delivering existing products whilst moving to S-101.
* Challenges in developing the NZ MGI WG work programme.
* IMO Member State Audit for its maritime obligations, LINZ is working the Maritime NZ on an action plan to respond to the findings.

The Chair suggested that those States who have impending audits to reach out to others who have already undertaken IMO Audits.

Papua New Guinea

* Hydrographic Department established in 2022, which is now separated for the AtoN department.
* Recruitment underway for seven positions, including hydrographic surveyors.
* Conducted stakeholder workshops on awareness of hydrography, charts, and reporting MSI. New survey priorities identified.
* Challenges with a lack of a national hydrographic programme, a CB plan, and arrangements for the development of MSI.
* Hydrographic actions under the current NMSA Corporate Plan include developing/enhancing hydrographic capability; monitoring shipping lanes; and a review of AtoN network.

Vice Chair commended their commitment in expanding and improving their operations.

Samoa

* MSI training undertaken as part of the SPC Safety of Navigation programme.
* AtoNs for Apia harbour provided by JICA.
* Challenges with limited number of staff with hydrographic expertise, nor a specific hydrographic department.
* Require the right capacity to develop new infrastructure in accordance with GMDSS Master Plan.
* Seek in promote a hydrographic programme and the digital transformation with a long term goal to support sustainable development.

Action for NZ to engage with Samoa to investigate how to support Samoa.

Solomon Islands

* Successfully recruited seven personnel to the Safety of Navigation Section – 4 x hydrography & 3 x AtoN.
* SPC supporting with MSI training; risk assessments; and AtoN Manager training.
* MoU with Australia being prepared
* Challenges with limited resources of a small team and limited funding.
* Require continuing capacity building support.

Tonga

* Tonga has a National Hydrographic Coordination Committee. A review of stakeholders has indicated others to join the NHCC.
* Participant in the SWPHC Hydrographic Leaders Programme
* Pacific Regional Navigation Initiative (funded by NZ) resulted in new charts with TO branding, and the UKs Commonwealth Maritime Economies provided opportunities to observe survey vessels.
* The Hunga Tonga Hunga Ha’api eruption has likely caused significant changes to the bathymetry. This has highlighted the lack of experience staff, office and government support.
* Challenges include limited hydrographic surveying experience; no hydrographic legislation, policy or guidelines; and hydrography is not a priority of the Government.

United Kingdom

* Increased ambition on tackling climate crisis, pollution, and biodiversity loss.
* Launch of a £500 million Blue Planet Fund that will support developing countries to protect the marine environment and reduce poverty.
* Working with the World Bank to deliver an IGIF -0 MSDI Maturity Roadmap for developing nations seeking to implement an IGIF-aligned MSDI using OGC standards.
* UK is engaging with industry in relation to Maritime Autonomous Surface Ships (MASS) to understand navigation data needs.
* Hosted GEBCO Map the Gaps Symposium in October 2022.
* Working to collaborate more with UK agencies receiving funding for seabed mapping by creating a UK Centre for Seabed Mapping.
* Challenges related to the future of navigation and the announcement of the withdrawal of paper charts. Stakeholder engagement carried out to understand the need and requirements for paper chart.
* Support the development of sub-ECDIS (vessels smaller than those required to have ECDIS) supplementary standards.
* HLP funded from UK, governed by SWPHC Steering Group. Special thanks for Therese Turner for running it; other commissions have expressed great interest in hosting something similar.

United States

* NGA and US Navy visited Palau this year to assist with getting the CSB trackers installed on vessels.
* The Fleet Survey team completed a survey of Palau in September 2022. The focus of the survey was on the primary channels and main thoroughfares.
* NOAA completed planned survey work around Guam and CNMI, mapping bathymetry and backscatter from nearshore environment to 1500 metres.
* NOAA: Planned survey work in FY23 around American Samoa and Pacific Remote Island Area.
* Navy: Continued CSB support to Palau in conjunction with Seabed 2030, UNH CCOM, and DCDB.
* State: Supporting SPC efforts to help Pacific Islands conduct marine spatial planning (MSP).
* Investigating branding PICT charts with two-letter country code.

Cook Islands

* Took part in the HLP
* LiDAR collection by Woolpert for coastal and flood mitigations collected and will be made available.
* Chart rebranding and distributed among industry.
* Challenges in engagement with government, funding, capability; lack of a Hydrography & Geospatial Strategy for Cook Islands.
* Considering replication of IGIF work done in Kiribati, and to modernise geodetic network.

NZ have offered support to review concept note and user requirements. FJ also offered support.

Kiribati

* Hosted an IGIF workshop in Kiribati and established a National Geospatial Coordination Committee to start engaging with stakeholders on hydrography.
* Formalised support with Seabed2030 through a MoU, which also created in country awareness.
* Kiribati Outer Island transport Infrastructure Project to improve maritime safety which will enable procurement of equipment and funding staff.
* HLP helped to set goals and track actions, and through collaboration with other PICs
* Looking to establish a MSDI and work towards supporting more hydrographic activity development within Kiribati including the goal to having a NHCC.
* Pursuing full IHO membership with support from UKHO

Niue

* Royal New Zealand Navy conducted surveys at the main wharf and other reef channels.
* Niue Nukutuluea Multiple-Use Marine Park established covering Niue’s EEZ.
* Challenges - no full VHF coverage and MSI training required for marine radio operators.
* Looking to maintain and install more AtoN, development of capacity and clarify boundary with TO
* Plans to implement Maritime Safety Act 2021.

Palau

* Secured funding for MSI CB for all staff, including promulgating MSI to NAVAREA Coordinator.
* Two Level 1 AtoN managers recently qualified.
* Surveys conducted at East Pass, West Pass and Malakal Harbor
* Convened first NHCC.
* Challenges with capacity and capability for hydrographic survey and SOLAS requirements.
* Planning for further MSI training.

**Decision 18:** To note all National Reports and presentations.

# Preparation for Day 2

The Chair advised that there will be a number of interactive sessions and requested delegates to review the agenda and come prepared to engage and contribute.

# Relevant International/Regional Organisations Reports and Activities

## SPC (Pacific Community)

Doc SWPHC20-10.1

Mr Salesh Kumar gave an overview of SPC and its activities, including the Maritime Integrated Programme, focusing on the Pacific Safety of Navigation project which supports governance, capacity building and infrastructure throughout the region. The project also worked to build understanding of the financial, climate and safety benefits of hydrography. Other SPC activities include:

* LiDAR capture in Tonga and Vanuatu
* Climate and Oceans Support Program in the Pacific
* Tides mobile app
* Tide gauge maintenance
* Regional tides training
* Pacific Maritime Boundaries Dashboard (data gaps in seabed mapping in support of delimiting maritime boundaries
* Pacific Data Hub
* Plans for a research vessel post-2024.
* LiDAR capture in

The Chair acknowledged SPC have a number of activities that have links to the Commission’s work and recommended SPC reach out to the Commission to collaborate with promotion and possible funding for training opportunities. The Chair also noted with interest the data gaps and suggested passing this information to Member States to consider assisting through research vessels that may be in the region. With regards to the Pacific Data Hub, it would be good to understand how the data is shared and made available; and consider a regional data sharing policy.

Mr John Lowell (US) encouraged SPC to engage with the IHO DCDB and share data. He also mentioned a recent tool that is available to help research organisations plan transits to cover areas where there are data gaps. However, it only works if the DCDB is aware of the data coverage. Mr Kumar believed the data in the Data Hub is linked to the DCDB and that SPC is trying to get the Data Hub connected to the SWPHC MSDIWG.

## IALA

Doc SWPHC20-10.2

Mr Omar Frits Eriksson gave an overview of IALA’s work, promoted membership and their work encourage locally produced aids to navigation if they need standards. The region is becoming more standardised with their buoyage. IALA invite coastal states to engage with them to help meeting international obligations for maritime safety, including providing education.

US asked if coastal states could join as associate members rather than full member as cost could be a barrier. National members are those with authority for the country. IALA took an **action** to see what can be done for those coastal states with limited funding to access to the benefits of IALA membership.

## IMO

Doc SWPHC20-10.3

Mr Bekir Sitki Ustaoglu thanked the SWPHC for the invitation to present to the meeting. Mr Ustaoglu noted that both IMO and the SWPHC are strongly engaged in delivering a programme of technical assistance to support developing countries to strengthen their institutional, legal, managerial and technical capacity to meet their international obligations.

Mr Ustaoglu focused on the work the IMO is doing to establish a Regional Presence Office (RPO) in Fiji and the implementation of the IMO’s Capacity Building Decade, particularly for Small Island Developing States. The RPO is to be established in early 2023 and Mr Ustaoglu advised that one of the roles has been appointed to an officer from the Solomon Islands and discussions are underway to appoint a second role to Papua New Guinea. He was pleased to announce that both appointments are young women with experience within their respective maritime authorities.

The region is a priority for the IMOs technical assistance programme and they remain committed to working closely with the SWPHC in delivering capacity building opportunities in the region.

**Decision 19:** To note the organisations reports.

# SWPHC Draft Work Plan & Priorities Working

## Review of SWPHC Work Plan Activities

Doc SWPHC20-11.1

The Chair gave an overview of the creation of the Work Plan.

## Work Plan & Priorities Working Group

Doc SWPHC20-11.2

Mrs Hilary Thompson (Chair of the WP&P WG) thanked those involved in the WGs monthly meetings, and showed the activities achieved during this first year of the 3 year plan. Of note is achieving the target of two seats on the IHO Council (Fiji and NZ); the successful delivery of the Hydrographic Leaders Program; the presentation on cybersecurity delivered during the 1-day VTC Pre-Meeting; the sharing of S-100 experiences through two workshops; the development of a data value proposition; and the delivery of a Seabed 2030 webinar series. The completed activities are highlighted in the document SWPHC20-11.1. The WG Chair noted that some activities have value in being undertaken annually and this will be discussed at WG meetings.

The Chair reminded the meeting that the goals were aspirational so very pleased with the progress to date. UK praised the group and the drive of the WG Chair.

**Decision 20:** To note the report and progress made by the SWPHC WP&PWG.

# Hydrographic Leaders Programme (HLP)

Doc SWPHC20-12 & [recording](https://youtu.be/HVNKj6IYhmE)

Ms Sulueti Savou (FJ) provided an introduction to the session which covered the HLP, its objectives, the breadth of the program, the participants and the topic for discussion, Challenges Faced by Island Nations. The 16 HLP participants came from 12 nations in and associated with the Pacific region.

Mr Vaipo Mataora (CK) gave an overview of the session on the Challenges Faced by Island Nations, in relation to the limitation of people and resourcing, as highlighted in the National Reports delivered, and governments’ lack of prioritisation through not understanding the value of hydrography.

Mr Sioeli Fifita (TO) focused on the relationship with Primary Charting Authorities and the benefits of strengthening the relationship. Capacity building with small offices is a challenge with often the same person given formal training and expected to bring that back to share.

Mr Bradly Cooper (NZ) explained how the breakout group session would work, with each group responding to different questions as pose by the HLP cohort.

# Hydrographic Leaders Programme (HLP)

The meeting broke into groups to discuss questions posed by the Hydrographic Leaders Programme cohort. Each group was led by a cohort member who reported back to the meeting. ([Recording](https://youtu.be/f7V88VDWat4))

The group led by Mr Brad Cooper (NZ) addressed how to convince governments to commit to prioritise hydrography. Mr Daniel Miner’s (UK) group addressed which of the solutions proposed by the HLP cohort could the Commission support. The group led by Mr Tion Uriam (KI) considered what could change or add to the challenges the HLP cohort had identified. And Mrs Jennifer Coppola’s (NZ) online group discussed all the questions.

Mrs Thérèse Turner, the HLP facilitator, thanked the cohort for their cooperation in this pilot scheme. Mrs Turner encouraged the Commission to include some of the ideas proposed by the cohort in the Work Plan.

AU commended the group on the activity, in particular, identifying the challenges and looked forward to being involved in supporting the implementation of the solutions.

**Decision 21:** To acknowledge the significant effort of the HLP to lead an engaging and stimulating workshop to identify challenges faced by island nations and suggest responses.

**Action 22:** HLP Cohort to collate and compile notes from breakout session.

**Action 23:** SWPHC to review breakout notes and consider what action might be taken to overcome the challenges.

**Action 24:** Review HLP evaluation and decision on next HLP.

# Empowering Women in Hydrography (EWH)

Doc: SWPHC20-14A, SWPHC20-14B & [recording](https://youtu.be/ZLAfgd5YC-4)

Mrs Thompson (AU) reminded the Commission that this topic it’s not just for the women but for everyone that can influence change in their organisations. Mrs Thompson provided an overview of the EWH Project and introduced the SWPHC Empowering Woman in Hydrography Pacific Network, which was established in September 2022. Fifty-five women have joined the network to-date from around the region as well as from the UK and US; and work in national hydrographic offices, maritime safety authorities, navies, Government science organisations, industry and academia.

The network has met twice online and was started to connect with others, understand the roles, show leadership roles and have role-models to learn from and aspire to be. The group has identified what it is women want from the network and what they can give.

The session included experiences from members of the network (Jennifer Brindle of Precision Hydrographic Services and Palu Soqoiwasa of the Fiji Navy) describing the different roles within hydrography; a presentation from Jan Pierce (Toitū Te Whenua LINZ) on the benefits to a diverse workforce; and a group discussion on pathways into hydrography.

Mrs Thompson encouraged the Commission to be an advocate for empowering women.

**Decision 22:** To note the establishment of the SWPHC Empowering Women in Hydrography in the Pacific Network and acknowledge the considerable progress made and activities since SWPHC19.

**Action 25:** SWPHC to promote and champion the SWP Women in Hydrography network.

# Safety of Navigation: Delivering as one

Doc: SWPHC20-15 & [recording](https://youtu.be/YcvH0NO763E)

Mr Manteigas (IHO) presented on the collaborative networks that are important to be able to deliver as one. The CB International Partners comprise joint meetings of IHO, IMO, WMO, IOC, IALA, IAEA, FIG and IMPA which have been disrupted by COVID over the past two years. Mr Manteigas noted that the Pacific Regional Transport Officials Meeting was held in November 2022 and was attended by AU and NZ. He invited Mrs Thompson (AU) to provide an overview of the meeting and papers presented. She advised that a subsequent joint paper will be prepared to go to the Fifth Pacific Regional Energy and Transport Ministers’ Meeting (5th PRETMM) in May 2023. The paper will comprise the papers on the IHO Strategic Plan and SWPHC Work Plan; Pacific Regional Navigation Initiative (PRNI); and the new IALA, an Intergovernmental Organisation for Coastal States.

Mr Manteigas invited Mr Ustaoglu (IMO) to comment on the collaborative work of the IMO. Mr Ustaoglu noted the challenges with working together due to COVID and re-iterated the IMO’s commitment to collaborating with the IHO and other CB International Partners on capacity building activities in the region. Mr Eriksson (IALA) commented that IALA also attended the Officials meeting and described how they are working with the UKHO in other parts of the world.

Mr Manteigas finished his presentation with a request to Commission to consider how the IHO, IMO and IALA can support the region and the Member States, recognising the issues and challenges faced by the region, such as climate change and sea-level rise.

Mr David Weinstein (NZ MFAT) informed the group that Vanuatu have confirmed that they will be hosting the PRETMM in May 2023. Work is being done to confirm the agenda, which is to be finalised at the Official’s meeting prior to PRETMM. Mr Weinstein commented that not all the papers put forward will necessarily be part of the agenda, rather they will be for information. He commented that although information papers are valid for raising the awareness of hydrography, if there is a desire to seek action from the Ministers then the paper needs to clearly define what actions and decisions are required.

Mr Kumar (SPC) commented that SPCs Regional Pacific Strategy – Safety of Navigation, endorsed at the 3rd PRETMM, is up for renewal.

The Chair requested of SPC, as the Secretariat for the PRETMM, early notification of the agenda and that the SWPHC would like to be involved in the review of the Regional Pacific Strategy.

**Decision 23:** Agree on the need for the IHO, IMO and IALA to work together with SWPHC and SPC to address the capacity building needs of Member States in the Pacific region.

**Action 26:** IMO, IALA and IHO to work together with SWPHC and SPC to address the capacity building needs of the Member States in the SWP region.

**Action 27:** SPC to share revised draft to the Regional Pacific Strategy – Safety of Navigation Project - for review and input.

**Action 28:** Prepare paper for the 5th Pacific Regional Energy & Transport Ministers Meeting (9-12 May 2023) (PRETMM).

**Action 29:** SPC to advise process and timeline to prepare paper for submission to 5th PRETMM.

# UNGGIM Integrated Geospatial Information Framework (IGIF) – Implementation case studies

Doc: SWPHC20-16 & recordings: [Kathrine Kelm](https://youtu.be/JEWuNeen7Zs), [Andrew Coote](https://youtu.be/ONq1ofZTzII), [Tion Uriam](https://youtu.be/ONq1ofZTzII?list=PLyE56PxGCqSXbklRAkqPGsWjgYYjDo0Z_&t=2286)

Following on from the overview of IGIF at the 1-Day Pre-Meeting, Ms Kathrine Kelm (World Bank Group) presented on ‘Building Partnerships: Understanding the World Bank’. The World Bank Group is comprised of five institutions. The focus is on the International Bank of for Reconstruction (IBRD) and the International Development Association (IDA). These institutions provide financing to governments for projects, rather than the World Bank implementing a project. All engagement with the World Bank is initiated through the governments Ministry of Finance. The challenge is convincing decision makers to invest in Spatial Data Infrastructures which are outside the well-established business lines that exist for traditional infrastructure. Evidence is needed to support the goals of the government, with climate change and adaptation plans being key use cases to support funding from within the government or requesting the World Bank capital funding. The World Bank has developed templates and tools to assist countries implementing the IGIF. These are open and available on the [World Bank Open Learning Campus](https://d3gzc8yfvw5zzm.cloudfront.net/Geospatial/Template/index.html) website.

Mr Andrew Coote (ConsultingWhere) presented on a case study from the Philippines and the integration of land and marine management. The focus of the study is on Fundamental Data, all of which have a connection to the marine space. The biggest challenge is climate change action, where the ability to integrate datasets is crucial. The World Bank has an agenda whereby any project has to have an aspect of climate change consideration. And in order to make decisions about climate change, geospatial data is key. Unfortunately, data is not always available in a country so there is an opportunity now to integrate global datasets such as the Global Mangrove Dataset produced by the UKHO.

The work in the Philippines has used the UKHO’s IGIF-MSI Maturity Roadmap to tune the diagnostic tools for the marine environment. This leverages existing good practice as per the IGIF-H, IHO C-17 and OGC Standards. Similar to the SWPHC MSDIWG’s work on value propositions, over 50 marine use cases have been developed for the Philippines. These will be used to identify priorities where there are big benefits from small investment, or small benefits but for a large number of people. Mr Coote also presented quantifiable benefits from an AU study and example of spatial data infrastructures in NZ (marine protected area) and the US (a marine cadastre). This in particular is of interest to the World Bank who commit millions of dollars to a land cadastre. He finished off by introducing a new concept of spatial finance which requires spatial data to predict and assess climate risk.

Mr Tion Uriam (KI) presented on Kiribati’s experience with implementing the IGIF, investigating how hydrography would support their government’s strategic plan and vision across other sectors besides the ocean. While the Government had no policy specifically for hydrography, they do exist for other activities in the marine domain such as fisheries, coastal zone management, infrastructure development and disaster risk management. The key was to identify where links could be made to other national policies to promote the importance of hydrography. This was achieved through stakeholder workshops with the theme “Geo-enabling our communities to build resilient villages”, resulting in establishing the National Geospatial Coordinating Committee (NGCC) who identified three of the IGIF Strategic Pathways to focus on. The aim is to develop a national strategy and National Action Plan on an Integrated National Geospatial Information framework. A second stakeholder workshop was held with the theme “Geospatial for informed decision making”. The NGCC has a work plan with the aim to report back to the UNGGIM on progress and achievements.

Mr Uriam also advised the Commission that Kiribati has recently signed an MOU with Seabed 2030 Project. This demonstrates Kiribati’s commitment to support the global effort to map the entire ocean floor by providing data.

**Decision 24:** To note the presentations from the World Bank, Consulting Where and Kiribati.

**Action 30:** Members are encouraged to enrol for the World Bank Group self-paced online course on Strengthening Geospatial Information Management.

**Action 31:** Members are encouraged to review the IGIF components, methodology and implementation use cases.

**Action 32:** Members are encouraged to complete the *Quick-Start Guide for undertaking an IGIF-aligned MSDI* and provide feedback to OGC/WB team.

**Action 33:** Members are encouraged to complete IGIF MSDI Maturity Assessment.

# GEBCO

## GEBCO Programme

Doc SWPHC20-17.1

Mr Sam Harper (IHO Assistant Director and GEBCO Permanent Secretary) gave an overview of the collaborative nature of GEBCO programme and its community makeup. Member States are reminded that 2 of the 3 IHO Strategic Plan Goals are connected to the work of GEBCO.

The GEBCO Working Week 2024 is made up of committee meetings and a Map the Gaps Symposium, Mr Harper invited the meeting delegates to consider hosting this in the region.

**Action 34:** SWPHC to consider hosting the GEBCO Working Week 2024.

## Seabed 2030, South and West Pacific Ocean Regional Centre (SaWPaC)

Doc SWPHC20-17.2

Ms Belen Jimenez Baron (SaWPaC Data Manager) presented an overview of Seabed 2030 and the SaWPaC region. Globally, coverage is currently 24.5%, with the SaWPaC region at 25.6% and 15% for the SWPHC region. Ms Jimenez encouraged the Coastal states of the Commission to support Seabed 2030 by providing data. Data is collected through collaboration with data donors and partners; the centre is open to suggestions on how the gaps can be mapped and advised that Seabed 2030 can fund some data collection.

Ms Jimenez reminded the meeting of the importance of using data loggers for crowdsourced bathymetry, and offered to organise the supply of loggers to those who are interested. She also provided examples of how the GEBCO map has been used to assist the analysis and modelling of the impact of tsunami.

US noted that not many Coastal states present have provided a positive response to the IHO CL 21/2020 or the IRCC CL 01/2020, allowing the release of CSB data to the IHO DCDB. The US then encouraged those present to consider providing a positive response..

**Decision 25:**  To note the presentation on the Seabed 2030 Project.

**Decision 26:** To note the presentation from the Seabed 2030 SaWPaC.

# Crowdsourced Bathymetry (CSB) / IHO Data Centre for Digital Bathymetry (DCDB)

## CSB and IHO DCDB Activities

Doc SWPHC20-18.1

Ms Jennifer Jencks (IHO DCDB Director and Chair of CSBWG) provided an update on activities including how to contribute data and how to access the viewer for data the Centre holds.

**Decision 27:** To note the presentation from IHO DCDB Director.

## SWPHC CSB / Seabed 2030 Coordinator Report

Doc SWPHC20-18.2

Ms Jimenez provided an overview of CSB and examples of how CSB data has been used.

Mr Stuart Caie (SWPHC CSB / SWPHC Seabed 2030 Coordinator) provided an update on the Coastal states that have responded positively to the Circular Letter and provided guidance on how the response can be formulated.

## Palau CSB Project

Doc SWPHC20-18.3

Mr Hayes Moses (PW) provided an overview of Palau’s experience with installing data loggers, provided by Seabed 2030. Of the 100 loggers provided, approximately 50 were installed before Covid-19 restrictions started. Support was provided by the NGA with installation of the loggers. Lessons learned included a lack of capacity and ‘know how’ to install the loggers; installation was vessel dependant; there is a need for standards to guide the process; multiple vessels needed to collect data on the same route; and regular data download is important. Mr Moses also reminded the Commission of the importance of providing a positive response to the Circular Letters to ensure the data makes it to the global grid.

**Decision 28:** To note the presentation from Palau.

# Industry / Expert Contributors

Docs SWPHC20-19.1 to 19.7

Presentations were received from EOMAP, Woolpert/AAM, Fugro, IIC Technologies, Ocean Infinity, JICA and P&O Cruises.

**Decision 29:** To note the presentations from the Industry / Expert Contributors.

# WENDWG12

No update given.

# SWPHC WGs

## International Charting Coordination Working Group (ICCWG)

Doc SWPHC20-21.1

Mr Robert Cario (AU) Chair of SWPHC ICCWG gave an overview of the progress of the WG and provided an update on the following SWPHC19 actions.

* Action 15: *SWPHC to consider extending the role of the Charting Regional Coordinator for the implementation of the S-100 Implementation Roadmap*. Decision made to extend the role as described.
* Action 16: *SWPHC to coordinate the efforts on the implementation of S-100, promote the cooperation and exchange of experiences, and identify CB requirements*. Two S-100 Workshops held, with recordings available on the SWPHC website. This action is ongoing, as there are plans to hold workshops annually.
* Action 19: *SWPHC to consider role of regional charting coordinator to include S-1xx Products as RHC WEND Coordinator*. The ToRs are to be updated to include the change of scope, with a redline version circulated by end of 2023 and to be ratified SWPHC21.

Mr Cario also advised that new INT charts and ENCs have bene published by SHOM and AU. AU have withdrawn 13 of the 1.5 million scale series and NZ has made a submission to withdraw four 1.5 million scale charts this year.

**Decision 30:** To note the update from the SWPHC ICCWG.

**Decision 31:** To extend the role of the Charting Regional Coordinator for the implementation of the S-100 Implementation Roadmap.

**Action 35:** Assign the role of the Charting Regional Coordinator for the implementation of the S-100 Implementation Roadmap to the ICCWG.

**Action 36:** SWPHC to coordinate the efforts on the implementation of S-100, promote the cooperation and exchange of experiences, and identify CB requirements.

**Action 37:** SWPHC to consider the role of regional charting coordinator to include S-1xx Products as RHC WEND Coordinator.

**Action 38:** ICCWG to review ToR with respect to the role of regional charting coordinator and circulate.

## Marine Spatial Data Infrastructure Working Group (MSDIWG)

Doc SWPHC20-21.2

Ms Helen Phillips (UK) Chair of SWPHC MSDIWG gave an update on the progress of the WG. There has been increased participation, more regular meetings and workshops. Ms Phillips thanked Paul Sliogeris for his contribution as Vice-Chair.

Work was undertaken to align the MSDIWG work with the SWPHC Work Plan, on open data policies and make presentations on promoting open data. The WG created a data sharing value proposition [*Why should we share data?*](https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/SWPHC/SWPHC20/SWPHC20-21.2Why%20should%20we%20share%20data.pdf)which aligns to the UN Sustainable Development Goals and would support conversations with Ministers and Governments.

**Decision 32:** To note the update from the SWPHC MSDIWG.

**Decision 33:** To acknowledge the significant effort of the SWPHC MSDIWG to develop and produce a data value proposition.

**Action 39:** Encourage member nations to join and participate in future meetings of the SWPHC MSDIWG.

## National Impacts of S-100

Doc SWPHC20-21.3

Mr John Lowell (US) reminded the meeting that the obligation to SOLAS is to arrange for the collection of hydrographic data; nations do not need to do everything themselves. The key take away is that SOLAS is flexible on how each nation fulfills its responsibilities. Mr Lowell compared the traditional Hydrographic Office (1921) with the modern Hydrographic Office (2023) which is now developing S-100 products beyond Safety of Navigation. Whatever the S-100 Product Specification, Governance is key in producing the product or arranging for it to be produced. Mr Lowell concluded that Regional Hydrographic Commissions can help and that Governance is key. Nations need to; understand their view of geospatial data and establish a data policy as needed; know the data providers and establish a National Coordination Committee; and coordinate work with the Primary Charting Authority.

The Chair reminded the meeting that HOs need to think about data rather than the traditional role of producing products. And the importance of coordination at a national, regional and global level.

FR agreed that Governance is important and the eco-system is evolving, but advised that the key word is “authoritative” and that HOs have a key role to play not just with safety of navigation products. Mr Lowell agreed but felt that there might not just be one authority.

**Decision 34:** To note the presentation from the US on National impacts of S-100.

**Action 40:** Members are encouraged to understand their nations view of geospatial data and establish a data policy as needed.

# Capacity Building

## Report from 2-Day Capacity Building workshop on Hydrographic Governance

Doc SWPHC20-22.1

Mr Matt Borbash (US) SWPHC CB Coordinator, provided an overview of activities undertaken during the 2-Day Hydrographic Governance workshop. Over 30 participants took part in the workshop focusing on three goals:

1. National Interest and Prioritisation of Hydrography
2. National Institutional Arrangement for Hydrography
3. External Coordination and Partnership on Hydrography

Prior to the workshop Coastal states were asked to complete a gap analysis of their Nation’s current status in relation to the three areas, providing a baseline. Three breakout groups discussed the common themes identified in the gap analysis and what action were needed to bridge the gaps. The intention being to create an Action Plan for each country which would feed into a regional capacity building strategy. The chairs of each breakout group reported back on the discussions, with support from Rapporteurs from the Hydrographic Leaders Programme.

AU congratulated the workshop participants on their work, noting that the PCA also has a role to play, including supporting high level Ministers meetings and helping build capacity.

The Chair thanked the IHO and AU for funding delegates to attend the CB workshop which also enable participation in the Commission meeting. This model works very well and wished to see it continue.

**Decision 35:** To note the report from the 2-Day Capacity Building workshop on Hydrographic Governance.

**Decision 36:** To endorse resubmission of (CBSC19 P-05), Workshop on Disaster Response, to CBSC21.

**Action 41:** Establish a CB WG to develop a SWPHC CB Strategy.

**Action 42:** Collate and compile notes from 2-Day Hydrographic Governance workshop.

## Report of CBSC20, PICTs Matrix & 3-year CB Plan

Doc SWPHC20-22.2

Mr Borbash provided an overview of the CBSC20 meeting and VTC intersessional meeting. It was agreed that funded activities not completed due to Covid-19 would be carried over into the 2023 workplan. Mr Borbash provided an update on the IHO Capacity Building Strategy Review Project Team which eventuated in the addition of a Phase 0 (zero) for Hydrographic Governance and the inclusion of a fifth step to the CB process to measure the effectiveness of CB assistance through monitoring and evaluation. This was endorsed at C6.

An overview was provided of CB activities that have occurred and are planned for the region. He requested those organising training activities to inform the CB Coordinator for inclusion in a IHO CB event calendar and to remind States that many training course are annual, so it is possible to prepare well ahead of the call for applications.

Mr Borbash reminded the meeting that the Workshop on Disaster Response is planned to be rolled over to 2024 and requested that Coastal states communicate their CB needs to the PCAs and the CB Coordinator; that external partners inform the CB Coordinator of all CB opportunities that the SWPHC region can benefit from; and consider contributing to the Empowering Women in Hydrography Project.

**Decision 37:** To note the report and approve the 3-year CB work plan.

**Decision 38:** To note the progress on the regional capacity building initiatives.

**Decision 39:** Establish a CB WG to develop a SWPHC CB Strategy.

**Action 43:** Confirm CB funding 2024 Disaster Response Workshop.

**Action 44** Review and update PICTs CB matrix.

## Future CB Initiatives for CBSC21

Mr Borbash commented that no additional initiatives are being put forward to CBSC21 as the following are in place.

* MSI Workshop to be held in Fiji, July 2023
* Disaster Response Workshop, 2024

# SWPHC Draft Work Plan 2021-2016

## Work Plan & Priorities for 2023-2026

Doc SWPHC20-23.1

Mrs Hilary Thompson (AU) Chair of SWPHC WP&PWG reminded the meeting that the Work Plan is aligned to the IHO Strategic Plan Goals and has a SWPHC specific Goal. Mrs Thompson asked those involved with the Hydrographic Leaders Programme whether there was a desire to run the programme again. Mr Manteigas (IHO Secretariat) asked whether the Programme could be shared outside the region and there was general agreement for that to happen. The UK mentioned there was positive interest from other RHCs and actively recommend it in other RHC that the UK are involved. NZ confirmed that there has been a lot of interest for a Cohort 2 from within the region and would likely form part of the next Work Plan.

The Work Plan was reviewed and those activities completed were highlighted along with focus areas for coming year.

**Decision 40:** To note the focus areas and activities for consideration for the Work Plan.

# SWP Disaster Response Framework

Doc SWPHC20-24

Mr Stuart Caie (NZ) gave an overview of the amendments to the draft document and advised that a redline version will be circulated to Members by June 2023 for comment.

# 3rd Session of the IHO Assembly, 2-5 May 2023

Doc [A3 agenda](https://iho.int/en/circular-letters-documents-0)

The Chair reviewed the Draft Agenda noting registration to attend closes 20 March 2023 and that there is a separate registration for the EWH event. It was noted that the SWPHC EWH Network had submitted their activities for consideration for presentation. He encouraged new Members to attend the Assembly to present their nations flag.

# World Hydro Day (WHD) 2023

“Hydrography – underpinning the digital twin of the ocean”

The Chair encouraged members to consider how the Commission could produce something collaboratively regarding the meaning of *digital twin* of the ocean, particularly for the region.

**Action 45:** Chair to seek ideas for Members to consider producing content for WHD 2023.

# International Hydrographic Review

Mr Jasbir Randhawa (AU) talked about articles published from the region in the latest volume including a reminder about an online survey sent out. He commented that the IHR is celebrating its centenary this year so there will be some special articles.

There is a permanent action about contribution to the Review, deadline for next edition is 31 July 2023.

# Designation of SWPHC Representative to the IHO Council

Three nominations were received from AU, FJ and NZ. AU subsequently withdrew their nomination. As a result, FJ and NZ are designated as the SWPHC Representatives to the IHO Council. It was noted that FJ are the first Pacific Island Country to be hold a seat on Council and were congratulated on this achievement.

**Decision 41:** FJ & NZ are designated as the SWPHC Representatives to the IHO Council.

**Action 46:** SWPHC to inform IHO Secretariat of SWPHC Representatives on Council.

# Election of Chair/ Vice-Chair

The Chair called for nominations for the roles of Chair and Vice-Chair. PG nominated AU as Chair which UK seconded, supported by FJ and FR.

AU nominate FJ as Vice-Chair which UK seconded, supported by TO, NZ and WS.

**Decision 42:** To elect AU as Chair of the SWPHC

**Decision 43:** To elect FJ as Vice-Chair of the SWPHC.

# Election of Capacity Building Coordinator

Mr Borbash (US) advised he was willing to continue in the role. This was supported by AU, FR, NZ, UK and WS. Mr Borbash raised the idea of the role being supported by a member of the HLP.

**Decision 44:** To re-elect US as the CB Coordinator of the SWPHC.

# Review of the Actions and Decisions

The draft Actions and Decisions were reviewed and will be circulated for comment.

# Date and Venue of SWPHC21

FJ offered to host SWPHC21 in 2024, subject to confirmation. US advised it would consider hosting SWPHC22 in region in 2025 and AU offered to host SWPHC23 in 2026.

AU commented that there are challenges for some Members to attend as there are often conflicts with other IHO meetings and suggested agreeing on a date for SWPHC21 as soon as possible.

**Decision 45:** To hold the next meeting (SWPHC21) in FJ in February 2024.

# Action 47: FJ to confirm SWPHC21 in February 2024.

# Action 48: US to work with PCA nations to consider hosting SWPHC22 in February 2025.

# Action 49: AU to confirm hosting SWPHC23 in Australia in February 2026

# Closing Remarks

The Chair closed the procedures thanking the participants for their engagement and contributions to a productive and successful meeting. Participants had been challenged to deliver and they had. There were many highlights, not least of all the designation of two seats on council.