United Kingdom
Hydrographic Office

SWPHC18-07I UK National Report

UNITED KINGDOM NATIONAL REPORT

to the

SOUTH-WEST PACIFIC
HYDROGRAPHIC COMMISSION (SWPHC)
18TH MEETING

17 -19 FEBRUARY 2021
(Virtual Meeting)

This report supplements the UK Generic National Report, posted on the UKHO website

Gov.uk/ukho

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1. UK HYDROGRAPHIC OFFICE (UKHO)

UK Delivery of Hydrographic Services

1.1 The UK delivery of hydrographic services is described in the UK Generic National Report; it is worth highlighting, however, the close liaison which exists between UK's Hydrographic Office (UKHO) and UK's maritime administration Maritime & Coastguard Agency in providing a coordinated approach to hydrographic and maritime safety representation both nationally and internationally.

UKHO Governance and Targets

1.2 This is described in the UK Generic National Report to the IHO.[1]

UKHO Organisation

1.3 Details of the UKHO's organisation are provided in the UK Generic National Report (Section 1) together with general contact details. Specific contact details relevant to the SWPHC region are included at the end of this Report.

Production Systems

1.4 This is described in the UK Generic National Report.

Cooperation and Partnerships

1.5 The UK is committed to bilateral arrangements, developed in co-operation with other international government hydrographic authorities and data providers, covering a range of topics, including the use/re-use of data protected by copyright and intellectual property rights of those authorities. These also promote other forms of co-operation between the participants, helping to enhance international maritime safety and protection of the environment.

2. REGIONAL ACTIVITY

UK Overseas Territories Programme

2.1 The UKHO continues to run the Overseas Territories Seabed Mapping Programme (OTSMP), which is reviewing the status of hydrography within the UK Overseas Territories (OTs), and continues to highlight the importance and utility, both locally and within UK government, of Hydrography and the wider blue economy within the context of the UK OTs. Despite current restrictions as a result of COVID-19, the UKHO is continuing to plan and deliver Programme activity in several UK OTs through to 2021, as well as working with OTs to ensure their compliance with the Hydrographic elements of SOLAS.

2.2 The UK fulfils the Primary charting responsibilities of the following UK OT within the SWPHC region:

- Pitcairn Islands (Pitcairn, Henderson, Ducie and Oeno Islands)

2.3 The OTSMP has UK government funding to assess and redress the deficit of bathymetric data and lack of sound hydrographic governance in the UK's OTs. The programme is now in its fifth year and has seen recent completion of an airborne lidar survey in Bermuda which captured bathymetry data in Bermuda's coastal waters down to approximately 40m water depth.

Commonwealth Marine Economies Programme

2.4 The UKHO is also continuing to support the Commonwealth Marine Economies (CME) Programme. The CME Programme is providing 17 Commonwealth Small Island Developing States (SIDS) with accurate hydrographic and scientific data relating to their marine environment, as well as capacity building for national bodies. Of these 17 countries, 9 are within the SWPHC region, including:

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[1]. This will be updated in the course of 2021.

- Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

2.5 The UK Government's CME Programme aims to support the sustainable economic growth of SIDS by maximizing the potential of their marine resources, helping to improve their resilience to climate change and natural disasters, protect their environment and food security, and ultimately improve the livelihood of local communities. Despite entering its final year, UKHO continues to take a leading role in this programme with a series of capacity building training courses planned through to 2021. We are now in discussions regarding possible continuation of the programme.

Surveys and Capacity Building

2.6 Details of the management of civil hydrographic surveys in UK Home Waters are provided in the UK Generic National Report, and on the UKHO website. UK's National Hydrographic Committee (known as the Civil Hydrography Annual Seminar (CHAS) meets on an annual basis and provides the necessary breadth of interests to ensure that all surveying requirements are considered when prioritising the work of the Civil Hydrography Programme (CHP).

2.7 Since the last SWPHC, validation of the Satellite Derived Bathymetry survey in Kiribati has been completed. The survey covered an area of 4,295 KM2, making it the second largest survey conducted under any of the programmes so far.

2.8 In total, UKHO survey operations under the OTSMP and CME programme have covered a combined area of nearly 20,000KM^2, 24% of which was conducted in the SWPHC region.

2.9 In November 2019, UKHO held a hydrographic governance workshop at their offices in the United Kingdom under the auspices of the CME Programme. Representatives from all countries in scope form the region attended the workshop along with a number of Caribbean nations. The workshop was designed to help raise knowledge of the need for and requirements of hydrographic governance.

2.10 The UK continues to explore how we can strengthen the relationship with countries for which we are the Primary Charting Authority (PCA). We intend to increase our level of engagement to better understand prioritised requirements in the SWPHC region.

2.11 Any requests for survey assistance from nations within the SWPHC region will be considered. The UKHO has a dedicated team of specialists that manage the portfolio of survey and hydrographic development programmes. In addition to survey advice, the team are configured to provide support and advice in the development of hydrographic governance and identifying funding. Mr Sam Harper, Head of Hydrographic Programmes (a dedicated UKHO team that focuses on hydrographic survey programmes) is the initial point of contact for UKHO involvement in overseas survey programmes. Further information can be obtained from (hydrographicprogrammes@UKHO.gov.uk).

3. CHARTS

3.1 UK's Generic National Report provides information on UK's portfolio of chart products and services. The following paragraphs provide information specifically relevant to the SWPHC region.

Paper Charts

3.2 Information on UK's chart portfolio is provided on the ADMIRALTY website. The following charts have been published since the last SWPHC meeting as New Charts or full New Editions:

- 13 New Editions of charts previously adopted from the Australian (AUS) series

- 15 New Editions of charts previously adopted from the New Zealand (NZ) series

In addition, the table below lists the 62 charts that have been published, in addition to those mentioned above.

GB Chart Number	Title	Published
PNG512	Papua New Guinea – North East Coast, Misima Island to Bonvouloir Islands	20 March 2020
PNG554	Papua New Guinea – New Britain – New Ireland, Cape St George to Rabaul	20 March 2020
761	North Pacific Ocean – Marshall Islands	2 April 2020
762	North Pacific Ocean – Caroline Islands (Eastern Part)	2 April 2020
4064 INT 64	South Pacific and Southern Oceans - Marie Byrd Land to Southwest Pacific Basin	9 April 2020
PNG387	Papua New Guinea – North Coast, Vitiaz Strait to Karkar Island	15 May 2020
3484 INT 554	Indonesia, Phillipine Islands and Adjacent Waters - Mindoro Strait to Molucca Sea	21 May 2020
PNG621	Papua New Guinea – South Coast, Approaches to Port Moresby	12 June 2020
PNG627	Papua New Guinea – North East Coast, Jomard Entrance	12 June 2020
4073 INT 73	Indian Ocean Eastern Part	2 July 2020
4707 INT 707	Indian Ocean - Maldives to Sumatera	9 July 2020
2470	Indonesia and Malaysia - Singapore Strait to Selat Sunda including Java Sea	16 July 2020
4640 INT 640	New Zealand – North Island	30 July 2020
4641 INT 641	Australia and New Zealand – Norfolk island to Cape Egmont	30 July 2020
4643 INT 643	Australia East Coast – Cape Howe to Cape Moreton	30 July 2020
4648 INT 648	New Zealand – South Island	30 July 2020
4605 INT 605	New Zealand to Fiji and Samoa Islands	30 July 2020
4507 INT 507	Pacific Ocean - Philippines to Bismark Archipelago	6 August 2020
4603 INT 603	Australia – North Coast and Adjacent Waters	6 August 2020
4720 INT 720	Australia – Indonesia – Papua New Guinea, Booby Island to Cape Wessel including Gulf of Carentaria	6 August 2020
4723 INT 723	Australia – North West Coast, Java to North West Cape	6 August 2020
4725 INT 725	Australia – West Coasr, North West Cape to Cape Leeuwin	6 August 2020
4708 INT 708	Australia – West Coast	6 August 2020
PNG379	Papua New Guinea – South Coastm Kerema Bay to Port Moresby	7 August 2020
4060 INT 60	Australia and Adjacent Waters	13 August 2020
4061 INT 61	South Pacific Ocean – Western Portion	13 August 2020
4602 INT 602	Tasman and Coral Seas – Australia to Northern New Zealand and Fiji	13 August 2020
4604 INT 604	South Pacific Ocean – Coral and Solomon Seas and Adjacent Seas	13 August 2020

GB Chart Number	Title	Published
4644 INT 644	Australia – South Coast, Cape Otway to Cape Howe including Tasmania	13 August 2020
4709 INT 709	Australia – South Coast	13 August 2020
4726 INT 726	Westen Australia – Cape Leeuwin to Esperance	13 August 2020
4727 INT 727	Australia – South Coast, Entrance to Whidbey Isles	13 August 2020
4600 INT 600	South Pacific Ocean – New Zealand including Norfolk Island and Campbell Island	20 August 2020
4601 INT 601	South Pacific Ocean – Tasman Sea	20 August 2020
PNG386	Papua New Guinea – North Coast, Cape Cretin to Vitu Islands	21 August 2020
4052 INT 52	North Pacific Ocean – Southwestern Part	27 August 2020
4506	North Pacific Ocean – Mariana Islands to the Gilbert Group	27 August 2020
4611	South Pacific Ocean – Southwest Pacific Basin to Pacific – Antarctic Rise	3 September 2020
4612	South Pacific Ocean – Chatham Islands to Pacific – Antartic Rise	3 September 2020
4613	South Pacific Ocean – Chatham Islands to Île Rapa	3 September 2020
4614	South Pacific Ocean – Île Rapa to Pacific – Antarctic Rise	3 September 2020
4606 INT 606	South Pacific Ocean – Tonga to Archipel des Tuamotu	3 September 2020
4639 INT 639	South Pacific Ocean – New Zealand, Kermadec Islands to East Cape	3 September 2020
4629 INT 629	South Pacific Ocean – Samoa Islands to Northern Cook Islands and Tokelau	10 September 2020
4630 INT 630	South Pacific Ocean – Samoa Islands to Southern Cook Islands	10 September 2020
4631 INT 631	South Pacific Ocean – Samoa Islands to Tonga including Niue	10 September 2020
4632 INT 623	South Pacific Ocean – Fiji to Tuvalu	10 September 2020
4633 INT 633	Pacific Ocean – Solomon Islands to Fiji	10 September 2020
4624 INT 624	Pacific Ocean – Santa Cruz Islands to Butaritari	10 September 2020
4637 INT 637	South Pacific Ocean – Vanuvatu to Norfolk Island	10 September 2020
4617 INT 617	Pacific Ocean – Tuvalu to Palmyra Island	17 September 2020
4619 INT 619	Pacific Ocean – Îles Marquises to clipperton Fracture Zone	17 September 2020
4638 INT 638	South Pacific Ocean – Fiji to Kermadec Islands including Tongatapu	17 September 2020
PNG523	Papua New Guinea – North East Coast, Nassau Bay to Finschhafen	18 September 2020
PNG516	Papua New Guinea – North East Coast, Trobriand Islands to Lusancay Islands	2 October 2020
PNG520	Papua New Guinea – North East Coast, Cape Nelson to Dyke Ackland Bay	2 October 2020
PNG521	Papua New Guinea – North East Coast, Dyke Ackland Bay to Cape Ward Hunt	2 October 2020
PNG522	Papua New Guinea – North East Coast, Cape Ward Hunt to Nassau Bay	2 October 2020
PNG513	Papua New Guinea – North East Coast, Bonvouloir Islands to Normanby Island including Egum Atoll	16 October 2020

GB Chart Number	Title	Published
PNG510	Papua New Guinea – North East Coast, Long Reef to Sudest Island	30 October 2020
PNG388	Papua New Guinea - North Coast, Karkar Island to Kairiru Island	24 December 2020
PNG389	Papua New Guinea – North Coast, Kairiru Island to Vanimo Harbour	7 January 2021

Digital Charts

3.3 As noted in Section 3.1, UK's Generic National Report provides information on UK's portfolio of chart products and services. The following paragraphs provide information specifically relevant to the SWPHC region.

ENCs

3.4 Within the SWPHC region, the UKHO has released a total of 94 ENC cells. The breakdown by usage band is shown in the table below:

ENC totals by usage band as produced by UKHO

SWPHC Region Released Cells	
ENC Usage Band	**Number of GB ENC's**
Usage Band 1	5
Usage Band 2	15
Usage Band 3	19
Usage Band 4	31
Usage Band 5	24
Usage Band 6	0
Total Number of ENCs	94

The tables below show revisions to GB ENC coverage for the SWPHC Region during 2019/20. The subsequent diagrams illustrate the current coverage of GB ENCs within the SWPHC Region.

New Cells Feb 2020 - Jan 2021	Week No.
No New GB ENCs	

Cancelled Cells	Week No.	
Feb 2020 - Jan 2021		Replacements
GB200761	WK50/20	US2FAS03
GB204623	WK50/20	US2FAS04

Figure 1: GB ENCs West of 180°

Figure 2: GB ENCs East of 180°

ENC Distribution

3.5 The UKHO, along with other European hydrographic offices, was a founder member of the International Centre for ENCs (IC-ENC) Regional ENC Coordination Centre (RENC). IC-ENC concentrates its efforts on the validation and consistency of ENC data and leaves the marketing of ENCs to the shipping industry to its value-added resellers (VAR) and chart agents. Additional details can be found on the IC-ENC website (www.ic-enc.org).

The UKHO also acts as a VAR in its own right, particularly promoting a global range of ENCs under the AVCS brand alongside its successful ADMIRALTY range of paper charts and publications. Additional details can be found on the ADMIRALTY website (www.admiralty.co.uk).

4. PUBLICATIONS

Paper Publications

4.1 The Admiralty Paper Publications in the SWPHC region are as follows:

ADMIRALTY Sailing Directions:
NP 13 Australia Pilot Vol 2
NP 14 Australia Pilot Vol 2
NP 15 Australia Pilot Vol 3
NP 34 Indonesia Pilot 2
NP 39 South Indian Ocean Pilot
NP44 Malacca Straight and W Coast of Sumatra Pilot
NP51 New Zealand Pilot
NP60 Pacific Islands Pilot Vol 1
NP61 Pacific Islands Pilot Vol 2
NP62 Pacific Islands Pilot Vol 3

ADMIRALTY Tide Tables:
NP204 Tide Table 4 - South Pacific Ocean

ADMIRALTY Lists of Lights:
NP 83 Lights List K - Western Pacific Oceans, S of the Equator
NP 88 Lights List Q - Eastern Pacific Oceans, S of the Equator

ADMIRALTY Lists of Radio Signals
NP 281 (2) (Vol1 Part 2) Maritime Radio Stations - Americas, Far East, Oceania
NP 282.2 (Vol 2 Part 2) Radio Position Fixing Systems
NP283 (2) (Vol 3 Part 2) Maritime Safety Information Services - America , Far East, Oceania
NP 286 (4) (Vol 6 Part 4) Pilot Services, VTS & Port Ops – Indian Sub-Continent, SE Asia & Australia

New Editions published since last SWPHC FEB 2020:
ADMIRALTY Sailing Directions:
NP 13 Australia Pilot Vol 2 Last ed 27/08/20
NP14 Australia Pilot Vol 2 - Last ed: 20/06/19
NP 34 Indonesia Pilot 2 – Last ed: 07/03/2019
NP 39 South Indian Ocean Pilot – Last ed: 24/09/2020
NP44 Malacca Straight and W Coast of Sumatra Pilot Last ed: 03/10/2019
NP62 Pacific Islands Pilot Vol 3 - Last ed: 09/01/20

ADMIRALTY Tide Tables:
NP204 Tide Table 4 - South Pacific Ocean Last ed: 20/08/2020

ADMIRALTY Lists of Lights:
NP 83 Lights List K - Western Pacific Oceans, S of the Equator Last ed: 30/01/2020
NP 88 Lights List Q - Eastern Pacific Oceans, S of the Equator Last edition 05/12/2019

ADMIRALTY Lists of Radio Signals
NP 281 (2) (Vol 1 Part 2) Maritime Radio Stations - Americas, Far East, Oceania Last ed: 26/11/2020
NP 282.2 (Vol 2 Part 2) Radio Position Fixing Systems, Last ed: 26/03/20
NP283 (2) (Vol 3 Part 2) Maritime Safety Information Services - America , Far East, Oceania last ed: 10/12/20
NP 286 (4) (Vol 6 Part 4) Pilot Services, VTS & Port Ops – Indian Sub-Continent, SE Asia & Australia last ed: 08/10/20

New Editions to be published:

ADMIRALTY Sailing Directions:

NP44 Malacca Straight and W Coast of Sumatra Pilot TBC – Autumn 2021
NP51 New Zealand Pilot TBC – Autumn 2021

ADMIRALTY Tide Tables:
NP204 Tide Table 4 - South Pacific Ocean 12/08/2021

ADMIRALTY Lists of Lights:
NP 83 Lights List K - Western Pacific Oceans, S of the Equator - 04/02/2021
NP 88 Lights List Q - Eastern Pacific Oceans, S of the Equator - 25/02/2021

ADMIRALTY Lists of Radio Signals
NP 281 (2) (Vol 1 Part 2) Maritime Radio Stations - Americas, Far East, Oceania - 25/11/21
NP 282.2 (Vol 2 Part 2) Radio Position Fixing Systems 18/03/21
NP283 (2) (Vol 3 Part 2) Maritime Safety Information Services - America , Far East, Oceania 09/12/21
NP 286 (4) (Vol 6 Part 4) Pilot Services, VTS & Port Ops – Indian Sub-Continent, SE Asia & Australia 09/09/21

These publications are all maintained on a continuous revision cycle and new editions are published every 3-5 years or as required.

Full details of the ADMIRALTY publication range and their status can be found on the ADMIRALTY website (https://www.admiralty.co.uk).

Digital Publications

4.2 The UKHO offers digital equivalents to its existing paper publications to support the IMO mandate of ECDIS. These publications provide mariners with additional functionality and automate the task of updating.

4.3 The UKHO produces a range of ADMIRALTY Digital Publications which are digital versions of ADMIRALTY paper Nautical Publications. These publications are subscription-based and updatable by Notice to Mariners.

- **ADMIRALTY e-Nautical Publications (AENP):** e-Book versions of ADMIRALTY Sailing Directions and reference publications.
- **ADMIRALTY Digital List of Lights (ADLL):** Digital versions of ADMIRALTY lights publications.
- **ADMIRALTY TotalTide (ATT):** Digital versions of ADMIRALTY tidal publications.

- **ADMIRALTY Digital Radio Signals (ADRS):** Digital versions of ADMIRALTY radio signal publications.

4.4 The **ADMIRALTY Digital Catalogue** (ADC) can be downloaded free from the ADMIRALTY website (www.admiralty.co.uk). It includes details of all paper and digital charts and publications and is updated weekly. It is a useful tool to check chart coverage within the region, and to show the latest edition dates of both charts and publications.

5. MARITIME SAFETY INFORMATION

5.1 Responsibilities. The UK's principal responsibility within the SWPHC region is for its UK Overseas Territories, namely the Pitcairn Islands (Pitcairn, Henderson, Ducie and Oeno Islands), and those Commonwealth of Nations countries where the UK is the primary charting authority (PCA), including:

- Fiji
- Kiribati
- Nauru
- Tuvalu
- Vanuatu

5.2 UK maintains close liaison with the NAVAREA Co-ordinators for NAVAREAs X (Australia) and XIV (New Zealand), which cover the SWPHC area. Any information received at UKHO which requires urgent promulgation is passed to the respective NAVAREA Co-ordinator on a 24 hr basis.

5.3 GMDSS. With the exception of Australia and New Zealand, GMDSS coverage in the SWPHC region is generally sparse and administrations should be encouraged to develop their capabilities and infrastructure and to provide at least Phase One hydrographic capability to promulgate navigational warnings in a timely and efficient manner in their coastal regions, or to utilise the communications facilities of the NAVAREA X and XIV Co-ordinators.

5.4 Notices to Mariners. The current Admiralty weekly Notices to Mariners are now supplemented by daily updates; these are available on the UKHO website.

6. C-55 LATEST UPDATE

6.1 As described in the UK Generic National Report, UKHO is committed to providing regular updates to the C-55 entries for UK Home Waters and its Overseas Territories. The latest status is correctly depicted within C-55.

6.2 UK provides assistance to update C-55 entries to other countries, including Fiji, Kiribati, Nauru, Tuvalu, and Vanuatu, where UKHO provides primary charting, recognising that local input remains critical to the maintenance of C-55 as an up-to-date and authoritative reference document.

7. CAPACITY BUILDING

7.1 The UK fully supports the IHO Capacity Building Sub-Committee (CBSC) strategy, particularly its emphasis on getting Phase 1 and appropriate Phase 2 capacity in place to enable coastal states to meet their obligations under SOLAS Chapter V Regulations 4 and 9. The UK will continue to contribute resources to both CBSC initiatives and to providing bilateral assistance.

7.2 The UKHO has a post dedicated to International Capacity Building. Its key aims are to ensure that capacity building is properly considered in the UKHO activity and that the UKHO's capacity building activities are fully coordinated. It acts as the initial point of contact for the UKHO involvement in IHO capacity building activities, including UK involvement in regional hydrographic commission initiatives and IHO CBSC activities.

Cartographic Training provided by UKHO

7.3 The UKHO provides two annual CAT B accredited nautical cartography training opportunities to FGHO students. These are the IHO-NF GEOMAC Project course which is funded by the Nippon Foundation and the newly established UKHO course. Applications for the Nippon Foundation course are by responding to the IHO Circular Letter on the subject (this year it was CL09 /2020). The UKHO invites participants to its version of the course as part of bilateral arrangements. Due to the ongoing COVID-19 pandemic the UKHO have postponed the Nippon Foundation funded course scheduled to begin September 2020 and will run September 2021, with further courses running in February and September 2022.

The UKHO recognises the importance of training and to enable continued activity have developed a learning portal. The UKHO are running a series of virtual courses starting with an introductory series in March 2021.

ENC Training and Assistance

7.4 The UKHO strongly supports the successful uptake of ECDIS using ENC, and is happy to assist other nations to produce, maintain and distribute ENCs. Details of courses, sponsorship, venues and options for bespoke training provided by the UKHO are included in the UK Generic National Report.

Survey Training at Commander Fleet Operational Training - Hydrography, Meteorology and Oceanography

7.5 Nationally and internationally certified courses delivered by Commander Fleet Operational Training in Plymouth, are described in the UK Generic National Report.

8. OCEANOGRAPHIC ACTIVITIES

8.1 The UK participates on the IOC-IHO Guiding Committee for GEBCO, to support GEBCO's aim to provide the most authoritative, publicly available Bathymetric data sets for the world's oceans.

8.2 The UKHO participates on the IHO Tides, Water Levels and Surface Currents Working Group (TWCWG). Part of the WG activities involve Member States activities and experiences with long term [permanent] 'National' Tide Gauge Networks.

The UKHO is not directly tasked with owning and operating these at the UK national level - this is the remit of the National Tidal and Sea Level Facility (NTSLF, www.ntslf.org) operated by the UK Environment Agency.

8.3 Further details are described in the UK Generic National Report.

9. SPATIAL DATA INFRASTRUCTURES

9.1 **Status of MSDI.** The UKHO has recently adopted the UNGGIM IGIF as a means of auditing its work so far in establishing an MSDI and prioritising future activities. The UKHO's aspiration is to have established itself as the de-facto owner of the UK's MSDI by 2022. This aspiration has led to a review of the UKHO's internal data platforms and Marine Data Portal.

9.2 **Relationship with the NSDI.** The UK does not yet have a recognised NSDI however, a UK Geospatial Commission was established in 2017 with partner bodies consisting of several national geospatial agencies, including the UKHO. This Commission is focused on unlocking the value of geospatial data within the UK and is currently establishing a UK Geospatial Strategy which is likely to form the foundation of a NSDI soon. The Commission is currently supporting several collaborative projects being undertaken by the UKHO which all have strong links to NSDI principles.

9.3 Involvement in regional or global MSDI efforts. The UKHO is an active member of the UNGGIM and OGC groups which contribute towards Global MSDI activities and methodologies. The UKHO is also a member of the IHO MSDI Working Group as highlighted in Para 11.7 of this document as well as most of the MSDI Working Groups within the Regional Hydrographic Commissions for which the UKHO has membership of. The UKHO represents the UK on the UNGGIM Working Group on Marine Geospatial Information and has recently agreed to lead UK input into the UNGGIM-Americas Caribbean Geospatial Development Initiative (CARIGEO).

We are actively working at creating a domain with the appropriate standards to support national and international MSDIs, a good example is our sponsorship of S-121 a pilot project to develop a standard for the exchange of Maritime limits and boundaries.

UKHO is pleased to contribute to the SWPHC's MSDI ambitions; our Data Governance and Production Engineering Manager, Ms Helen Phillips, was recently confirmed as Chair of the regional MSDI working group and is working with partners across the region to take this shared agenda forward.

9.4 National implementation of the Shared Data Principles - including any national data policy and impact on marine data. The UKHO is actively engaged with a project directed by the UK Geospatial Commission to improve the handling and publication of Government datasets. This work involves improving the discoverability of data as well as working towards a set of shared principles within UK Government. The UKHO also continues to produce Electronic Navigational Charts to the IHO S-57 standard which contains a defined structure for metadata and the modelling of maritime related features. Work is ongoing to transition to the future IHO S-100 standards.

9.5 MSDI national portal. The UKHO has a Marine Data Portal which continues to grow and develop. As the organised gateway to our non-navigation data and services it gives people easy and timely access to marine location-based information from seabed to surface to help them with sustainable marine decision making. The Portal allows users access to several free of charge datasets and services mainly covering the UK territorial waters. The Portal provides access to premium data sets which can be purchased. The underlying Marine Data Portal technology has the capability to host other agencies', or even other nation's datasets.

9.6 Best practices and lessons learned. The UKHO, via the UK Geospatial Commission, is leading on a limited-scope Governance project to inform, guide and direct effective joint working between the participating UK agencies. The project will draw upon suggested Best Practices as represented via the UN-GGIM IGIF with a focus on technology-agnostic Governance between formal institutions, which may be extended across the Geospatial Commission in due course subject to circumstances.

The UKHO is currently collaborating with one of its Primary Charting Authorities to develop an MSDI Data Management Solution on their behalf, to aid in making geospatial data more widely discoverable, accessible and usable. It is hoped this will be made available to a select group of users within the PCA for use by the end of November, and lessons learnt will directly inform further MSDI Professional Services available from the UKHO.

9.7 Challenges and achievements. As part of the UK Geospatial Commission collaborative projects, the UKHO and other partners have made more public geospatial data available through a government hosted website data.gov.uk and are now:

- Looking at ways of standardising data licensing agreements;
- Improving the discoverability of national geospatial data;
- Providing guidance to better link geospatial data sets; and
- Increasing the range of data which is ingested.

10. INNOVATION

10.1 The UKHO has launched its new ADMIRALTY Marine Innovation Programme, spearheaded by the UKHO's Research, Design and Innovation team. The programme will give innovators and start-ups a chance to develop new solutions that solve some of the world's most pressing challenges when it comes

to our oceans. The launch of this Programme follows extensive research commissioned by the UKHO into the Blue Economy, which is estimated to be worth £3.2 trillion by the year 2030.

10.2 Successful innovation programme participants will develop their own solutions for these areas, using ADMIRALTY data sets that range from seabed composition samples and bathymetric profiles of the seafloor, to tidal and navigational information. Entrants to some challenges will also work alongside leading experts in research, design and development at the UKHO, with winners receiving an opportunity to launch their products into some of the world's fastest growing marine sectors.

10.3 The themes for this year's Programme are as follows:

- Unlocking Autonomous Vessel Navigation;
- Transforming Maritime Risk & Insurance;
- Identifying Suitable Areas for Offshore Renewable Energy; and
- Open Innovation in Blue Carbon Sequestration Areas.

11. OTHER ACTIVITIES

UK Celebrations for World Hydrography Day (WHD)

11.1 The UKHO celebrates World Hydrography Day. In 2020, UKHO recognised the achievements of Indonesia's Chief Hydrographer, RAdm Harjo Susmoro with the Alexander Dalrymple Award. In January 2021 UKHO hosted a virtual ADMIRALTY Blue Data Conference focused on "Enabling Autonomous Technologies."

Broader UK Government Work

11.2 The UK Member State, consisting of the UK, the Overseas Territories and Crown Dependencies, will be audited in 2021 (delayed slightly from late 2020 due to issues surrounding COVID-19) against the IMO Instrument Implementation Code's (IIIC) and Mandatory IMO Member State Audit Scheme (MIMSAS). This has raised awareness of the importance of maritime compliance and the benefits to everyone. To complement the work of the UKHO's OT Seabed Mapping Programme, the UK Maritime and Coastguard Agency have a UK Government aid funded programme to review maritime obligations compliance, search and rescue and oil pollution response.

11.3 The Commonwealth Litter Programme (CLiP), is led by the UK through the Centre for Environment Fisheries and Aquaculture Science (Cefas). Funded by the UK Department for Environment, Food and Rural Affairs, the programme will support four developing countries across the Commonwealth to take action on plastics entering the oceans. The programme will contribute to the UK meeting its responsibilities under the Commonwealth Blue Charter, which calls for Commonwealth countries to drive action and share expertise on issues affecting the world's oceans, including marine litter. CLiP will contribute to delivering the objectives under the UK and Vanuatu-led Commonwealth Clean Oceans Alliance (CCOA), which calls on other countries to pledge action on plastics. CCOA also promotes actions in line with the United Nations Sustainable Development Goal 14 (life below water) to conserve and sustainably use the oceans, as well as contributing to the UK Government's 25 Year Environment Plan. The programme will work in the South Pacific, Caribbean and Africa. In May 2019, work began in Belize.

The programme encompasses the following five pillars:

- Land based sources of litter;
- Sea based sources of litter;
- Removal of litter from the marine environment;
- Science and Education; and
- Outreach.

11.4 The UK's Joint Nature Conservation Committee continues its work in the Overseas Territories, providing technical assistance to support biodiversity and wider environmental management strategies and scientific advice. Their UK Government aid funded programme, Natural Capital in the Caribbean and South Atlantic Overseas Territories, uses economic assessments and analysis, spatial mapping and

satellite data to provide an assessment of natural capital in a few the UK's Caribbean and South Atlantic Overseas Territories.

11.5 The 2020s have designated by the United Nations as the Decade of Ocean Science for Sustainable Development. In addition, the G7 at the 2018 summit in Charlevoix, Canada also recognised the importance of the oceans by publishing the Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities. Seabed Mapping is a key component to both.

11.6 In 2019, the UK Department for Transport published its *Maritime 2050 (M2050) Navigating the Future strategy*. Along with the Government Office for Science's (GO Science) Foresight Future of the Sea Report, M2050 recognises the critical role of the maritime sector for the growth and development of the UK, including its Overseas Territories, as a primary facilitator of global trade. Both pivotal documents also recognise that marine geospatial data is essential to unlocking a sustainable and prosperous global blue economy and that the UKHO is a world leading authority in this area. The UKHO is currently working to bring together all the stakeholders in the UK's Marine Geospatial Community to ensure we have a comprehensive and inclusive approach to pursuing and developing opportunities to deliver against national and international priorities.

The UKHO's International Activities

11.7 Due to the UKHO's technical expertise, primary charting responsibilities and UK OTs the UK is represented at the following groups:

International Hydrographic Organization - HSSC		**Chair/Vice Chair**	**Member**
HSSC	Hydrographic Services and Standards Committee		x
DQWG	Data Quality Working Group		x
ENCWG	ENC Standards Maintenance Working Group	x	x
NCWG	Nautical Cartography Working Group		x
NIPWG	Nautical Information Provision Working Group		x
S-100WG	S-100 Working Group		x
TWCWG	Tides, Water Level & Currents Working Group		x
ABLOS	Advisory Board on the Law of the Sea		x
International Hydrographic Organization - IRCC		**Chair/Vice Chair**	**Member**
IRCC	Inter-Regional Coordination Committee		x
CBSC	Capacity Building Sub-Committee		x
CSBWG	Crowd-sourced Bathymetry Working Group		x
MSDIWG	Marine Spatial Data Infrastructure Working Group		x
WENDWG	Worldwide ENC Database Working Group		x
WWNWS	Worldwide Navigational Warning Service		x
GEBCO	General Bathymetric Chart of the Oceans		x
HCA	Hydrographic Commission on Antarctica		x
MACHC	Meso American and Caribbean Sea Hydrographic Commission	x	x
MBSHC	Mediterranean and Black Seas Hydrographic Commission		x
NIOHC	North Indian Ocean Hydrographic Commission		x
NSHC	North Sea Hydrographic Commission		x
RSAHC	ROPME Sea Area Hydrographic Commission		x
SAIHC	Southern African and Islands Hydrographic Commission	x	x
SWPHC	South-West Pacific Hydrographic Commission		x
International Maritime Organization		**Chair/Vice Chair**	**Member**
NAVTEX	NAVTXT Coordination panel	x	x

International Association of Marine Aids to Navigation and Lighthouse Authorities		Chair/Vice Chair	Member
ENAV	E-navigation Committee		x
Other International Bodies		**Chair/Vice Chair**	**Member**
IAU	International Astronomical Union		x
CIRM	Comité International Radio-Maritime		x
BALTICO	Navarea I member states meeting		x
ISO	International Standards Organisation		x
OGC	Open Geospatial Consortium		x
UNGGIM WGMGI	UNGGIM Working Group on Marine Geospatial Information		x
CARIGEO	Caribbean Geospatial Development Initiative		x

12. CONCLUSION

12.1 When SWPHC met in Wollongong in February 2020, none of us could have predicted the way in which the COVID-19 pandemic would transform the world. Much has changed in the space of a year. The global pandemic and associated economic shock has required us all to focus on critical activities while taking extra care to sustain one another during a most uncertain and rapidly evolving situation.

12.2 One area which has remained constant for the UKHO, and indeed the wider hydrographic community, is our commitment to serving the needs of the mariner. We have witnessed outstanding professionalism and enormous dedication across the world. Long may this continue.

12.3 While adhering to UK Government guidelines to delay the spread of COVID-19, UKHO implemented a range of precautionary measures including staff moving to a 'working from home' arrangement. We formalised our approach to prioritisation, recognising the critical importance of SOLAS and related products. In this regard, UKHO continues to enable safer navigation by revising and maintaining existing paper and electronic portfolios of charts and publications; and introducing new adoptions, New Charts, New Editions and New Cells, where appropriate.

12.4 The challenges of the year mean that we did not achieve everything we set out to do, with some plans curtailed, others postponed and zero opportunity for in-person engagement with our partners and colleagues. However, new ways of working have also provided opportunities to innovate. Our Innovation Programme offers significant opportunity for the non-navigational use of hydrographic data and gives tangible opportunities for the identification and best use of our technical acumen to mitigate the impact of shipping on our planet.

12.5 Notwithstanding the ongoing challenges of the pandemic, in 2021 UKHO will deliver a range of new, online courses to support the ability of Member States to support safety and efficiency of maritime navigation.

12.6 The UKHO remains committed to the South West Pacific region. This commitment is demonstrated through its primary charting responsibilities, its continuing interest in developing regional hydrographic self-sufficiency through capacity building measures and, through its commitment to the Commonwealth Marine Economies Programme.

Taunton February 2021

UKHO POINTS OF CONTACT

UKHO Website: GOV.uk/UKHO

The general UKHO address is:

UK Hydrographic Office,
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TAUNTON
Somerset
TA1 2DN
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For further information on this report, UKHO representation in international fora, and UKHO activities in general, please contact:

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&
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Input to the IHO Publication P-5 (*Yearbook*)
United Kingdom of Great Britain and Northern Ireland

Country information / Informations sur le pays/ Información sobre el país	
-Declared National Tonnage -Tonnage national déclaré -Tonelaje Nacional Declarado	48102992 tons (CCL7/2016)
National day -Fête nationale -Fiesta nacional	Second Saturday in June (Trooping the Colour)
-Date first joined IHO -Date d'adhésion à l'OHI -Fecha de adhesión a la OHI	21/06/1921
-Date ratification Convention -Date de ratification de la Convention -Fecha de ratificación de la Convención	03/05/1967
Official Representative to IHO (as designated by Member Government) **UNITED KINGDOM HYDROGRAPHIC OFFICE**	
Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent -Directeur du service hydrographique ou équivalent -Director del Servicio Hidrográfico o equivalente	National Hydrographer & Acting Chief Executive RAdm Peter Sparkes Postal address: Admiralty Way TAUNTON Somerset, TA1 2DN United Kingdom Tel: + 44 (0) 1823 484444 Fax: + 44 (0) 1823 284077 E-mail: IBTE@UKHO.gov.uk
Other point(s) of contact - Autre(s) point(s) de contact - Otros punto(s) de contacto	Director of Data Acquisition RAdm Rhett Hatcher Tel: + 44 (0) 1823 484444 E-mail: IBTE@UKHO.gov.uk
-Web site -site web -sitio web	http://www.gov.uk
Agency information	
Date of establishment Relevant National Legislation	12 August 1795 TS Baseline 25.09.64 12nm TS Limit 15.05.87 200nm EFZ 22.12.76
Top level parent organization	Publication of analogue and digital navigational charts and supporting publications, transmission of maritime safety information, Notices to Mariners (weekly), provision of geodetic, oceanographic and geophysical data and publications to meet defence requirements. Provision of tidal information

	and Ocean currents.
Number of INT charts published	782
Total number of paper charts	739 SNC (2018)
Number of ENC cells published	2966 GB cells (2018)
Type of publications produced	Full suite of Admiralty Charts and Publications including some digital products. For details see UK Catalogue of Admiralty Charts and Publications (NP131) or the UKHO web site: http://www.gov.uk/UKHO

Other Organizations providing national Hydrographic Services
Autre Organismes fournissant des services hydrographiques au niveau national.

CAPTAIN HYDROGRAPHY & METEOROLOGY AND HYDROGRAPHER OF THE NAVY

Contact information / Informations de contact / Información de contacto	
Head of the Hydrographic Office (if different from the person indicated above) -Directeur du service hydrographique (si différent de la personne indiquée ci-dessus) -Jefe del Servicio Hidrográfico (si es diferente de la persona indicada anteriormente)	Head of Hydrographic Office - Royal Navy. Capt(HM)/Hydrographer of the Navy Capt.(HM) Derek RAE* Tel: + 44 (0) 1752 555780 Fax: + 44 (0) 1752 555844 E-mail: navydevflot-capthmhofn@mod.uk or Derek.rae531@mod.gov.uk*
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	Postal address: Navy Command Headquarters, Leach Building, Whale Island, Portsmouth, Hampshire, PO2 8BY, United Kingdom of Great Britain and Northern Ireland
Agency information / Information sur l'agence / Información sobre la agencia	
Top level parent organization -Organisme mère -Organización asocieda de nivel superior	Ministry of Defence - Fleet Commander, Navy Command Headquarters, Leach Building, Whale Island, Portsmouth, Hampshire, PO2 8BY, United Kingdom of Great Britain and Northern Ireland
Principal functions of the organization or the department -Attribution principales de l'organisme ou du département - Principales funciones de la Organización o el departamento	Commander of RN ships, units and personnel engaged in collection analysis and dissemination of all forms of geospatial information through the hydrographic, meteorological and oceanographic disciplines.

Detail of surveying vessels/ Aircraft -Détail des bâtiments hydrographiques/aéronefs -Detalle de buques hidrográficos/Aeronaves	Displacement -déplacement -Desplazamiento	Commissioning Date -date de mise en service - Fecha de puesta en servicio	Crew -équipage -Personal
HMS SCOTT (H131)	13500	1997	63

HMS PROTECTOR HMS ECHO (H87) HMS ENTERPRISE (H88) HMS MAGPIE (H130)	5000 3470 3470 37	2011 2002 2002 2018	88 72 72 12
Other information of interest -Autres informations utiles -Otra información de interés	HM personnel are also borne in other RN vessels. Capt(HM) directs all hydrographic, meteorological and oceanographic support to the fleet. The programme for Civil hydrography in UK waters is managed by the Maritime & Coastguard Agency and is outsourced to the commercial sector. Training in hydrographic surveying and meteorology is provided for naval personnel by the Commander Fleet Operational Training - Hydrography, Meteorology and Oceanography HMS DRAKE HM Naval Base Devonport PLYMOUTH Devon PL2 2BG Details of courses are available at: www.mod.uk/DefenceInternet/AboutDefence/Whatwedo/Trainingand Exercises/IDT/IDTRN		

Annex B

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)
Country: United Kingdom of Great Britain and Northern Ireland

Country: Pitcairn Dependencies

C-55 Summary for:				**Comments on Charts:**
Country:	Pitcairn Dependencies			No coverage between 1:90 and 1:350,000 4 main islands covered by scales greater than 1:90,000
Country Iso Code:	PN			
Country SubCode:				
INT Region:	L			
Country/Depend:				
Last updated:	02/02/2021			
Provided by:	UK			
Chart coverage	**Passage (%)**	**Coastal (%)**	**Port (%)**	
INT	100	0	0	**Comments on Surveys:**
RNC	100	0	100	
ENC	100	0	0	
Status of Paper Charts				
Paper charts with depths in meters (%)			100	
Paper charts referenced to a satellite datum (%)			90	
Status of surveys	**Adequate (%)**	**Resurvey (%)**	**No survey (%)**	
0-200m	0	0	100	
> 200m	0	0	100	

MSI	**Y/N**	**Comments on MSI:**
Local warning	Unknown	Local authority responsibility - no requirement to promulgate internationally.
Coastal warning	YES	Only via NAVAREA coordinator & SafetyNET. Available/offered, but not currently used.
Nav warning	YES	Only via NAVAREA coordinator & SafetyNET.
Port warning	YES	Through UKHO.
GMDSS	**Y/N**	**Comments on GMDSS:**
Master Plan	NO	
Area A1	NO	
Area A2	NO	
Area A3	NO	
NAVTEX	NO	
SafetyNet	NO	

National MSI Self-Assessment

Country: United Kingdom – Pitcairn Dependencies
Organization: United Kingdom Hydrographic Office

1. Maritime area

Waters around the Pitcairn Islands

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
N/A			

3. GMDSS Master Plan

GMDSS Master Plan up to date – not applicable for this country

Equipment Type for Ports and Local Area	Software Version	Date of Up-date

Year Y-2		Year Y-1		Year Y	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
xx	xx.x Mins	xx	xx.x Mins	xx	xx.x Mins

4. NAVTEX Coverage: *N/A*

5. Operational Issues: *N/A*

6. Contingency Planning: *N/A*

7. Capacity Building: *N/A*

8. Other Activities: *N/A*

9. National Maritime Website: *N/A*

10. Recommendations: *Nil*

11. Summary: *There is no maritime radio station on Pitcairn Island apart from a local VHF station to communicate with visiting cruise ships.*