



UK Hydrographic
Office

NIOHC20-10.1 J UK National Report

UNITED KINGDOM NATIONAL REPORT

TO THE

20th NORTH INDIAN OCEAN

HYDROGRAPHIC COMMISSION MEETING (NIOHC)

13 – 15 July 2021 (Virtual Meeting)

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

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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 NIOHC 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 collaborative partnerships through 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 government funded Overseas Territories Seabed Mapping Programme (OTSMP), which is reviewing the status of hydrography within the UK Overseas Territories (OTs) and assessing and redressing the deficit of bathymetric data and lack of sound hydrographic governance. The programmes continue 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. The programme is now in its sixth 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, and an acoustic multibeam survey in the Falkland Islands of several high priority areas.

2.2 The UK fulfils the Primary Charting Authority responsibilities of the following UK OTs within the NIOHC region: British Indian Ocean Territory (BIOT).

Commonwealth Marine Economies Programme

2.3 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. Now entering its final year, the UKHO recently delivered three lots of 2-week remote multibeam survey continuation training courses. We are now in discussions regarding possible continuation of the programme.

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

Survey and Capacity Building

2.4 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).

2.5 In total, UKHO survey operations under the OTSMP and CME programme have covered a combined area of nearly 20,000KM² around the world.

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

2.7 Any requests for survey assistance from nations within this RHC 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 NIOHC region.



Paper Charts

3.2 Information on UK's chart portfolio is provided on the ADMIRALTY website. Within the NIOHC region, the UKHO has published 2 New INT Charts and 39 INT New Editions since the last NIOHC meeting (March 2019). The breakdown (correct to 23 June 21) is shown in the table below:

GB Chart Number	INT Chart	Title	Published
817	7430	Elephant Point to Mun Aung Island	28/03/2019
40	7315	Karachi Harbour	23/05/2019
59	7316	Port Muhammad Bin Qasim and Approaches	23/05/2019
263	7120	Port of Djibouti	30/05/2019
2659	7148	Shi`b Nazar to Qita` Kidan	13/06/2019
2658	7149	Outer Approaches to Jeddah (Jiddah)	13/06/2019
2599	7150	Approaches to Jeddah (Jiddah)	13/06/2019
2577	7151	Jeddah (Jiddah)	13/06/2019
IN22	752	Mumbai to Cape Comorin	31/07/2019
IN32	754	Kochi (Cochin) to Vishakhapatnam	31/07/2019
IN292	7021	Dwarka to Mumbai	31/07/2019
IN473	7031	Andaman Islands	31/07/2019
IN472	7032	Nicobar Islands	31/07/2019
IN254	7331	Approaches to Gulf of Khambhat	31/07/2019
IN263	7383	Cape Comorin to Colombo	31/07/2019
15	7154	Approaches to Jizan	08/08/2019

IN257	7343	Malvan to Kundapura	15/09/2019
IN258	7348	Kundapura to Badagara	15/09/2019
IN259	7356	Badagara to Kochi	15/09/2019
159	7010	Suez (As Suways) to Berenice (Barnis)	19/09/2019
2375	7132	Juzur Ashrafi to Safaga (Bur Safajah) and Strait of Tiran	19/09/2019
IN256	7340	Dighi (Murud-Janjira) Hr to Malvan	15/11/2019
IN255	7334	Approaches to Mumbai	15/12/2019
IN351	7419	Paradip to Pussur River	31/03/2020
816	7392	Trincomalee Harbour	30/04/2020
IN2015	7337	Port of Mumbai	15/06/2020
IN2076	7338	Jawaharlal Nehru Port and Trombay	15/06/2020
IN3009	7407	Kakinada Anchorage	15/06/2020
IN3012	7411	Visakhapatnam Harbour	15/06/2020
4701	701	Maputo to Muqdisho	09/07/2020
4702	702	Chagos Archipelago to Madagascar	09/07/2020
4703	703	Gulf of Aden to the Maldives and the Seychelles Group	09/07/2020
4707	707	Maldives to Sumatera	09/07/2020
IN352	7416	Gopalpur to Paradip	31/08/2020
833	7442	Andaman Sea	17/09/2020
801	7143	Plans in the Gulf of Aqaba	14/01/2021
2970	7002	Eastern Approaches to the Gulf of Aden	22/04/2021
58	7314	Approaches to Karachi	06/05/2021
819	7390	Galle Harbour and Approaches	13/05/2021
815	7391	Approaches to Trincomalee	27/05/2021
4714	714	Cocos (Keeling) Islands to Ile Saint-Paul	10/06/2021

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 NIOHC region.



ENCs

3.4 Within the NIOHC region, the UKHO has released a total of 116 ENC cells.

The breakdown by usage band is shown in the table below:

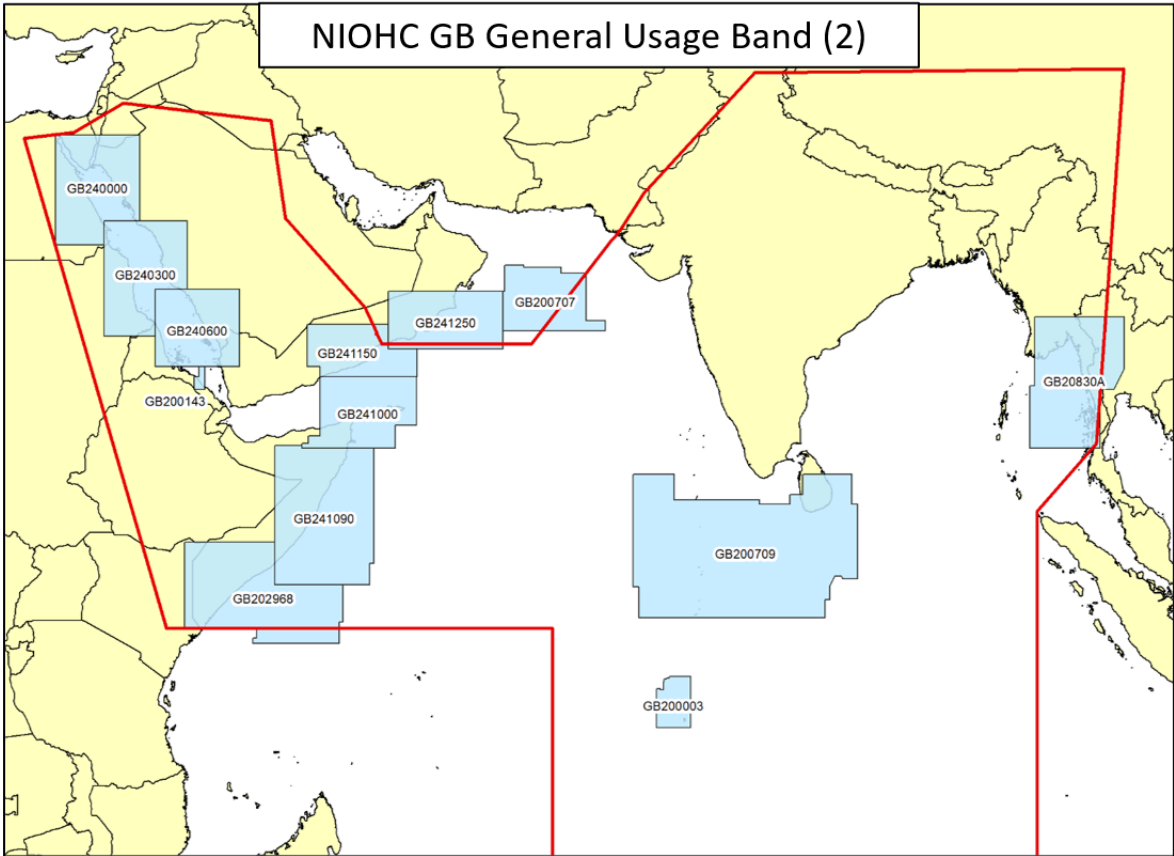
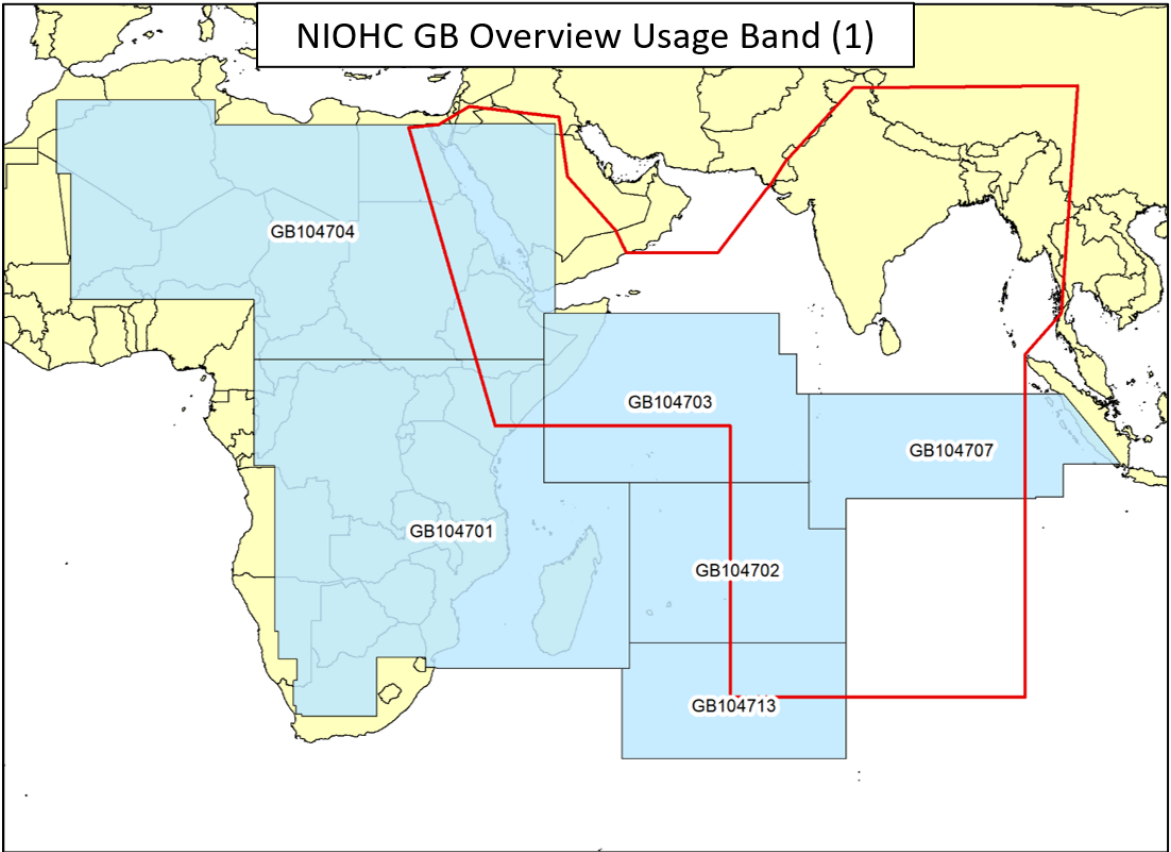
ENC totals by usage band as produced by UKHO

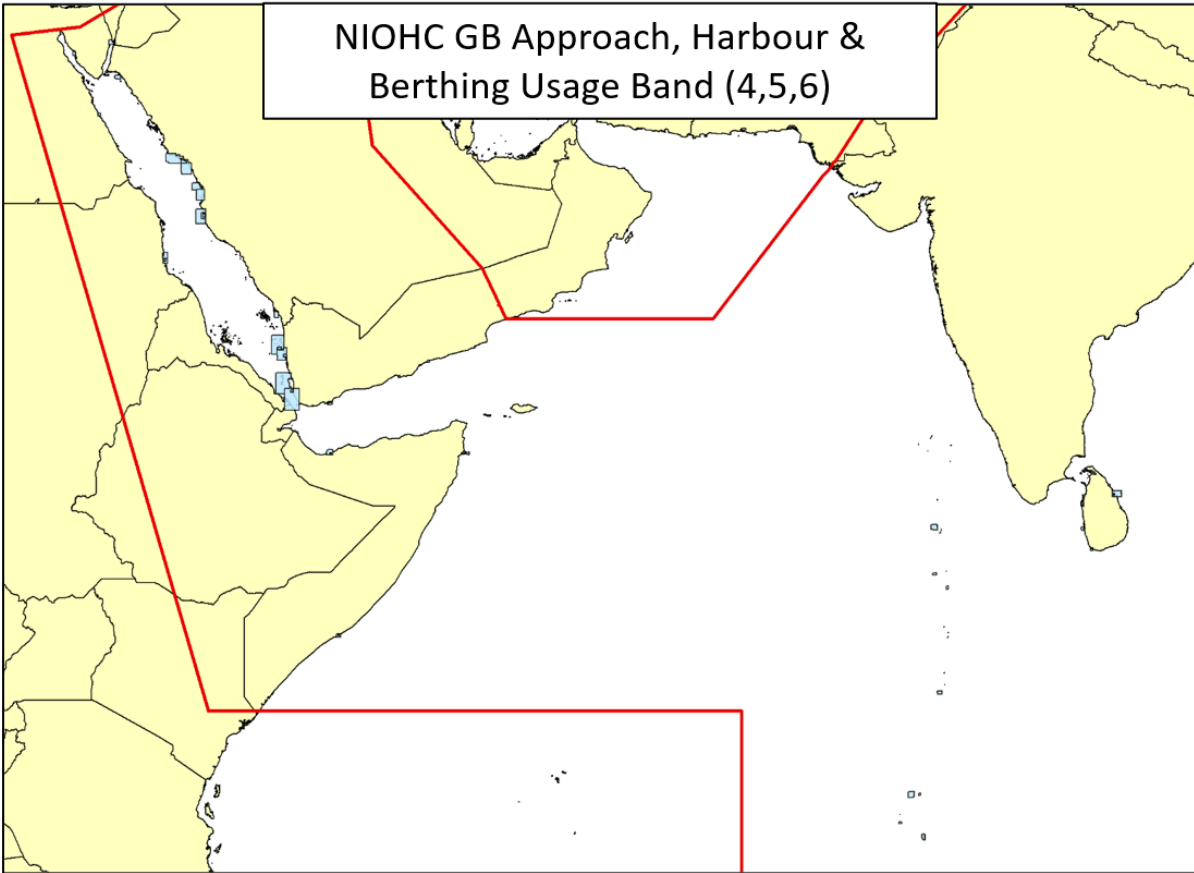
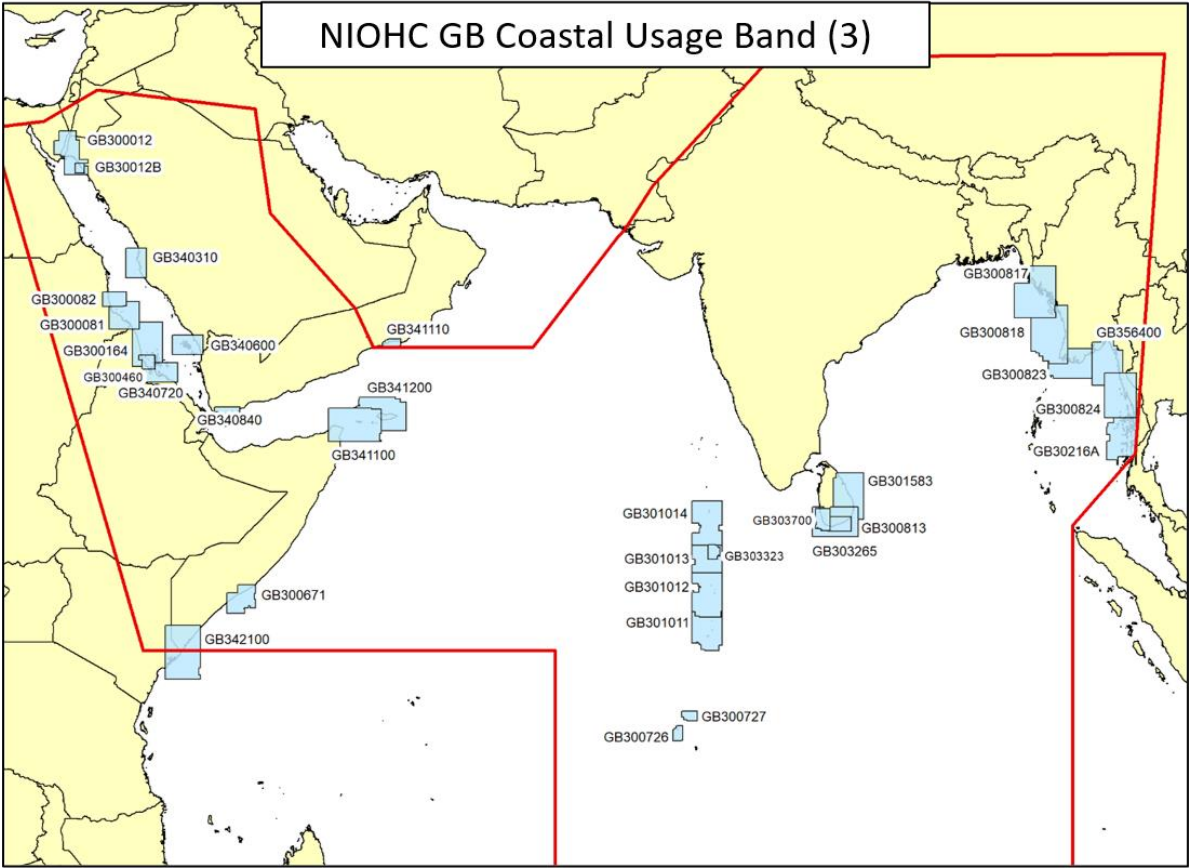
NIOHC Region Released Cells	
ENC Usage Band	Number of GB ENC's
1	6
2	13
3	32
4	38
5	26
6	1
Total Number of ENCs	116

The table below shows cancellations in the GB ENC coverage for the NIOHC Region during 2019/21. During this period there were no new cells.

Cancelled Cells	Week No.	Replacements	
		Cell Name	Cell Title
GB20829A	43_20	IN231BBN	KRISHNAPATNAM TO BASSEIN RIVER
GB202738	12_21	IN2273KI	Cancelled Cell (Title Not Specified)
GB340020	51_20	EG3GOS01	Ras Rawahimi to Suez Canal
GB300090	12_19	BD307425	Malancha River to St Martin's Island
GB340040	53_20	GB340060	Ashrafi Islands to Safaga
GB340060	04_21	EG3GOA01	Ras Muhammed to Nabq
	04_21	EG3GOS03	Ashrafi Islands to Safaga
GB43043B	51_20	EG4GOS3H	Approaches to Hurghada
GB43043C	43_19	EG4EGR17	Approaches to Safaga
GB40084A	33_19	BD407428	Approaches to Chattogram
GB40801F	03_21	EG5GOA1T	Strait of Tiran
GB400732	44_19	BD57451A	Pussur River – Monkey Point to Joyman Reach
GB44004A	51_20	EG5GOS2R	Ras Shukier Port
GB44006A	51_20	EG4GOS3Z	Approaches to Ziet Oil Terminal
GB500084	12_19	BD507427	Chattogram Harbour
GB500732	41_19	BD57451B	Pussur River – Joyman Reach to Mongla Port
GB54004B	27_19	EG5EGR16	Ras Gharib
GB50801G	03_21	EG5GOA1T	Strait of Tiran
GB53043A	43_19	EG5R17LS	Safaga Port

The subsequent diagrams illustrate the current coverage of UKHO produced GB ENC's within the NIOHC Region.





ENC Distribution

3.5 The UKHO, along with other European hydrographic offices, was a founder member of the International Centre for ENC (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).

3.6 Dissemination of Data to the Mariner in the Non regulated SOLAS market

With reference to action 12 from NIOHC 19 All nations requested to investigate and articulate the challenges and dissemination of data to the mariner in the non-regulated SOLAS market and report at NIOHC 20.

UKHO currently meet the needs of the non-regulated SOLAS market in the UK in 2 ways:

1. We have a set of paper charts tailored to this market, currently sold as ADMIRALTY Leisure Folios, they are being refreshed and relaunched as ADMIRALTY Small Craft Charts later this year.
2. We licence our data to derived chart producers who include it in a range of solutions, both paper and digital.

4. PUBLICATIONS

Paper Publications

4.1 The Admiralty Sailing Directions in the NIOHC region are as follows:

NP39 South Indian Ocean Pilot

NP64 Red Sea and Gulf of Aden Pilot

NP3 Africa Pilot Vol 3

NP21 Bay of Bengal Pilot

NP38 West Coast of India Pilot

New Editions Published since last NIOHC meeting March 2019:

NP 39 South Indian Ocean Pilot Published 24th September 2020

New Editions to be published:

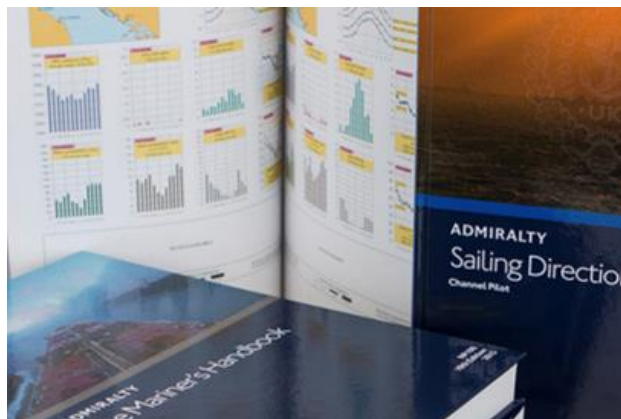
NP 64 Red Sea and Gulf of Aden Pilot to be Published 12th August 2021

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 other ADMIRALTY publication range and their status can be found on the ADMIRALTY website (www.admiralty.co.uk).

Digital Publications

4.2 The UKHO produces a range of ADMIRALTY Digital Publications which are digital versions of ADMIRALTY paper Nautical Publications to support the IMO mandate of ECDIS. These publications provide mariners with additional functionality, are subscription-based and automate the task of updating through 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.



4.3 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. MSI

5.1 The UK's principal responsibility in the NIOHC region is for the British Indian Ocean Territory (BIOT).

5.2 UK maintains close liaison with India, the NAVAREA Coordinator for NAVAREA VIII and with Pakistan, the neighboring NAVAREA IX Coordinator. Any information received at UKHO which requires urgent promulgation is passed to the respective NAVAREA Coordinator on a 24 hour basis.

5.3 GMDSS. GMDSS coverage in the NIOHC region is generally modest and administrations should be encouraged to develop and maintain their capabilities and infrastructure and continue to provide at least Phase One hydrographic capability to promulgate MSI in a timely and efficient manner. This can be achieved by utilising existing National Co-ordinators for MSI within each littoral state in the region and fostering direct liaison with NAVAREA Coordinator for Navigational Warnings and with Regional Hydrographic Offices.

5.4 Notices to Mariners. Assistance with promulgating Notices to Mariners and other paper and electronic chart correcting material should also be encouraged through co-operation with other hydrographic offices in the region if required. 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, UK is committed to providing regular updates to the C-55 entries for UK Home Waters and its Overseas Territories, including, within the NIOHC area. The latest status is correctly outlined within C-55.

6.2 UK has also provided assistance to other countries to update C-55 entries where UKHO retains the primary charting responsibility; recognizing 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. The UKHO invites



participants to its version of the course as part of bilateral arrangements. The UKHO continue to monitor the ongoing COVID-19 pandemic and hope to resume face to face international training as soon as possible.

The UKHO recognises the importance of continued training and to enable continued activity have developed a new Learner Management System (LMS). The LMS acts as the learning portal for training, offering all delegates ease of access to online seminars and interactive learning material. As a result of this the UKHO are currently running a series of virtual courses which started with an introductory series in March 2021. The first phase of this blended learning has seen 1,960 delegates places being assigned during a five month period, studying across three topics:

- Compiling for Navigational Safety
- Introduction to S-57
- Understanding ENCs.

As a result of customer and stakeholder feedback the following courses are under development and will be offered across the network in the future:

- Introduction to/unpacking of S-100
- Chart Awareness

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 in and Chairs 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.ntsrf.org) operated by the UK Environment Agency.

However, under the auspices of the Overseas Territories Seabed Mapping Programme (OTSMP), the UKHO has been working with external contractors to establish permanently installed tide gauges in Overseas Territories including to date Bermuda and the Turks and Caicos Islands. As well as being an essential part of the OTSMP work, they form an integral and important contribution to global sea level monitoring networks. Such permanent installations, are instrumental for the scientific study of long term sea level rise. In addition they can form part of tsunami warning systems and also provide essential observations for use in coastal inundation (storm surge) modelling studies. It is the UKHO's intent to further expand this network under the OTSMP, Commonwealth Marine Economies Programme (CMEP), and any future overseas work under other programmes.

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.

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 2021 by producing a short film to showcase the UKHO's rich history of partnerships. This includes the 140 collaborative partnerships established across the globe and our Primary Charting Authority responsibilities for 71 coastal states, to the work carried out through our International Hydrographic Programmes and International Training. The theme this year is "100 years of international cooperation in hydrography" and a link to the film can be found [here](#). In 2021, UKHO recognised the achievements of the US National Oceanic and Atmospheric Administration's Office of Coast Survey (OCS) team 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 (IICC) 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 been designated by the United Nations as the Decade of Ocean Science for Sustainable Development. In addition, the UK hosted this year's G7 summit which took place in Cornwall; 11-13 June 2021. This summit released the Carbis Bay G7 Summit Communique, which made reference to the importance of our oceans and 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. The UK has now taken on the Presidency of this year's G7 summit which is being hosted in Cornwall; 11-13 June 2021. This summit seeks to continue the narrative of creating a sustainable and prosperous future for our global ocean. This theme will then continue into the COP26 UN Climate Conference in November 2021, which is also being hosted by the UK Government, in Glasgow.

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.

11.7 Blue Belt Programme: In support of the UN Global Goals for Sustainable Development, the UK Government has committed £20 million to a four year programme providing long term protection and sustainable management of over four million square kilometres of marine environment across the UK Overseas Territories.

The Blue Belt Programme supports delivery of the UK Government's manifesto commitment to provide long term protection of:

- improve scientific understanding of the marine environment
- develop and implement evidence based, tailored marine management strategies including surveillance and enforcement
- ensure management is sustainable and long term

The programme is being delivered in partnership between the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the Marine Management Organisation (MMO) with the UK Overseas Territories on behalf of the Foreign and Commonwealth Office and the Department for Environment, Food and Rural Affairs.

From the NIOHC region, the Blue Belt Programme has helped to develop and enhance marine protection in the British Indian Ocean Territory BIOT. Highlights include:

- Supporting the BIOT Administration develop new environmental priorities. These priorities will ensure BIOT's Marine Protected Area continues to be effectively managed.
- Conducting a water quality survey around Diego Garcia. The results of which will help the BIOT Administration manage human activities in Diego Garcia.
- Supporting compliance and enforcement in BIOT. Blue Belt Programme has set up and run frequent and comprehensive surveillance across the territory, supplied new equipment to support enforcement activities and built relationships between the BIOT Administration and external organisations to improve daily patrol operations.
- Providing on going intelligence and live operational support during a multi-agency operation involving MRAG, BIOT Administration and EMSA. The operation resulted in the interception, detention and prosecution of a vessel illegally fishing in the BIOT Exclusive Fishing Zone.

Further information can be found in the [Blue Belt Annual Report 2021](#).

The UKHO's International Activities

11.8 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	x
NIPWG	Nautical Information Provision Working Group		x
S-100WG	S-100 Working Group		x
TWCWG	Tides, Water Level & Currents Working Group	x	x
HSWG	Hydrographic Survey Working Group	x	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	NAVTEXT 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	UNGGIM Working Group on Marine Geospatial Information		x
CARIGEO	Caribbean Geospatial Development Initiative		x

12. CONCLUSION

The UKHO continues its commitment to carrying forward hydrographic activities through the work of the IHO's Regional Hydrographic Commissions, and notes that each commission has its own particular opportunities and challenges. We continue to support NIOHC including the Capacity Building coordination and activity.

There remains a continuing challenge to link the scarce local data gathering resources into a broad programme of prioritised products.

When NIOHC 19 met in Muscat in March 2019, none of us could have predicted the way in which the COVID-19 pandemic would transform the world and much has changed in fifteen months. 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.

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.

While adhering to UK Government guidelines to minimise 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.

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. Notwithstanding and indeed by way of mitigating the ongoing challenges of the pandemic, in 2021 UKHO started to deliver a range of new, online courses to support the ability of Member States to maintain safety and efficiency of maritime navigation.

UKHO Taunton
July 2021

UKHO POINTS OF CONTACT

UKHO Website: [GOV.uk/UKHO](https://gov.uk/ukho)

The general UKHO address is:

UK Hydrographic Office,
Admiralty Way,
TAUNTON
Somerset
TA1 2DN
United Kingdom

For further information on this report, UKHO representation in international fora, and UKHO activities in general, please contact:

E-mail: IBTE@ukho.gov.uk

Telephone: +44 (0)1823 484444

For bilateral arrangements and other international partnering matters within the NIOHC region, please contact:

Mr Tim Lewis

Head of Partnering & Engagement, Middle East and Africa

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E-mail: Tim.Lewis@ukho.gov.uk

Mr Chris Hunt

Head of Partnering & Engagement, Asia Pacific

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Ms Lucy Fieldhouse

International Capacity Building Manager

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For charting matters in the NIOHC region, please contact:

From the Red Sea coast of Saudi Arabia to
Myanmar including the Indian Ocean Islands:

Mr Barry Woodman

Geographical Technical Lead,

Telephone: +44 (0)1823 484052

E-mail: Barry.Woodman@ukho.gov.uk

East Africa and western Red Sea
including Israel and Jordan:

Mr James Timmins

Geographical Technical Lead,

Telephone: +44 (0)1823 483941

E-mail: James.Timmins@ukho.gov.uk

For matters related to Sailing Directions within the NIOHC region, please contact: Email:

SDImpactAnalysis@ukho.gov.uk

&

Mr Paul Hardacre

E-mail: Paul.Hardacre@ukho.gov.uk

Telephone: +44 (0)1823 483427

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	40,631,143 tons
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
<p>Official Representative to IHO (as designated by Member Government)</p> <p>UNITED KINGDOM HYDROGRAPHIC OFFICE</p>	
Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent -Directeur du service hydrographique ou équivalent -Director del Servicio Hidrográfico o equivalente	<p>RAAdm Rhett Hatcher – National Hydrographer & Director of Defence & Data Acquisition</p> <p>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</p>
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	
-Web site -site web -sitio web	http://www.gov.uk
Agency information	
Date of establishment	12 August 1795
Relevant National Legislation	<p>TS Baseline 25.09.64 12nm TS Limit 15.05.87 200nm EFZ 22.12.76</p>
Top level parent organization	Ministry of Defence
Principal functions of the organization or the department	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	970
Total number of paper charts	3500 (Approx)
Number of ENC cells published	1771 GB cells
Number of Raster Charts	582
Number of Other Charts	52
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 <u>Derek.rae531@mod.gov.uk*</u>		
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	Postal address: COMDEVFLOT, Room 260, Defiance Building HM Naval Base Devonport, PLYMOUTH, Devon, PL2 2BG, 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 asociada de nivel superior	Ministry of Defence - Fleet Commander		
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	Displacement -déplacement -Desplazamiento	Commissioning Date -date de mise en service - Fecha de puesta en servicio	Crew -équipage -Personal

hidrográficos/Aeronaves			
HMS SCOTT (H131)	13500	1997	63
HMS PROTECTOR	5000	2011	88
HMS ECHO (H87)	3470	2002	72
HMS ENTERPRISE (H88)	3470	2002	72
HMS MAGPIE (H130)	37	2018	12
Other information of interest -Autres informations utiles -Otra información de interés	<p>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.</p> <p>Training in hydrographic surveying and meteorology is provided for naval personnel by the Commander Fleet Operational Training - Hydrography, Meteorology and Oceanography</p> <p>HMS DRAKE HM Naval Base</p> <p>Devonport</p> <p>PLYMOUTH</p> <p>Devon PL2 2BG</p> <p>Details of courses are available at:</p> <p>www.mod.uk/DefenceInternet/AboutDefence/Whatwedo/TrainingandExercises/IDT/IDTRN</p>		

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)
 Country: United Kingdom of Great Britain and Northern Ireland – no change to current publication

Country: British Indian Ocean Territory (BIOT)

C-55 Summary for:				Comments on Charts:
Country:	UK - British Indian Ocean Territory			
Country Iso Code:	UK			
Country SubCode:				
INT Region:	J			
Country/Depend:	United Kingdom of Great Britain and Northern Ireland - British Indian Ocean Territory			
Last updated:	01/07/2021			
Provided by:	UK			
Chart coverage	Passage (%)	Coastal (%)	Port (%)	Comments on Surveys: 1. Depths fall away sharply at the edge of the atolls. 2. Apart from Diego Garcia, modern surveys are required in the other atolls to locate all dangers.
INT	100	70	100	
RNC	100	70	100	
ENC	100	70	50	
Status of Paper Charts				
Paper charts with depths in meters (%)			100	
Paper charts referenced to a satellite datum (%)			100	
Status of surveys	Adequate (%)	Resurvey (%)	No survey (%)	
0-200m	0	1	99	
> 200m	2	0	98	

MSI	Y/N	Comments on MSI:
Local warning	Unknown	Local authority responsibility – no requirements to promulgate internationally.
Coastal warning	YES	Through NAVAREA coordinator via Enhanced Group Call
Nav warning	YES	Through NAVAREA coordinator via Enhanced Group Call
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 - British Indian Ocean Territory (BIOT)

Organization: United Kingdom Hydrographic Office

1. Maritime area: N/A

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
HQ British Forces	+246 370 3500	+246 370 3943	

3. GMDSS Master Plan

GMDSS Master Plan up to date

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

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: No MSI broadcasts for some time. Any MSI in the area is sent to UKHO for assessment and then forwarded to NAVAREA VIII with recommendations for SafetyNET broadcast as a Navigational Warning.