



United Kingdom  
Hydrographic Office

# **UNITED KINGDOM NATIONAL REPORT**

to the

**NORTH INDIAN OCEAN  
HYDROGRAPHIC COMMISSION (NIOHC)  
18<sup>TH</sup> MEETING**

**GOA, INDIA  
9 - 12 April 2018**

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

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## 1. UNITED KINGDOM HYDROGRAPHIC OFFICE (UKHO)

### UK Delivery of Hydrographic Services

1.1 The UK delivery of hydrographic services is described in the UK Generic National Report. However, it is worth highlighting the close liaison which exists between UK's Hydrographic Office (UKHO) and UK's maritime administration Maritime & Coastguard Agency (MCA) in providing a co-ordinated 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, see [www.gov.uk/government/organisations/uk-hydrographic-office/about](http://www.gov.uk/government/organisations/uk-hydrographic-office/about)

### 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 bilateral arrangements, developed in co-operation with other international government hydrographic authorities, covering a range of topics, including the use of copyright data. These also promote other forms of co-operation between the participants, helping to enhance international maritime safety and protection of the environment.

## 2. SURVEYS

2.1 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 taken into account when prioritising the work of the Civil Hydrography Programme (CHP). CHAS was expanded in 2007 to include a much wider range of organisations, which conduct hydrographic surveys, and has been considerably successful in promoting co-operation between these organisations.

### **Commonwealth Marine Economies (CME) Programme**

**2.2** At the 2015 Commonwealth Summit, the then Prime Minister of UK announced a £5.6million package of measures to help small island countries reduce poverty by preserving their marine environments and making best use of their maritime resources. The Commonwealth Marine Economies (CME) Programme aims to support the sustainable growth of Commonwealth Small Island Developing States (SIDS) within the Caribbean, Pacific and Indian Ocean regions. The Programme is in its second year and has had funding confirmed for a further 2 years.

The Programme is being delivered on behalf of the Foreign and Commonwealth Office (FCO) by a partnership of world-leading UK government marine expertise; UKHO, the Centre for Environment Aquaculture and Fisheries Science (Cefas) and the National Oceanography Centre (NOC).

**2.3** UK continues to explore how we can strengthen the relationship with countries for which we are the Primary Charting Authority (PCA). This continues to be a challenge in terms of our geographical distance from our regional partners, but we have increased our level of engagement and our CME Prog. provides a useful framework for this.

### **Overseas Territories Seabed Mapping Programme**

**2.4** UK has been successful in receiving central government funding to assess and redress the deficit of bathymetric data and lack of sound hydrographic governance in the UK's Overseas Territories (OTs). This programme is currently in year two and is funded for a further two years. Again, year one was largely focused on understanding the requirements of the OTs, and remedial survey and capacity building activity has commenced this year.

**2.5** Any requests for survey assistance from nations within the NIOHC region will be considered, as the UKHO has a dedicated team of specialists that manages our 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 is the Head of International Programmes and Training, a dedicated UKHO team that focuses on international survey programmes, capacity building and cartographic training, and is the initial point of contact for UKHO involvement in overseas hydrographic programmes and Regional Hydrographic Commission initiatives. Further information can be obtained from ([samuel.harper@ukho.gov.uk](mailto:samuel.harper@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 UKHO website. The following paragraphs provide information specifically relevant to the NIOHC region. Two miscellaneous charts have been published since the last NIOHC meeting.

The following charts have been published since the last NIOHC meeting:

Published New Charts:

<b>GB Chart Number</b>	<b>INT Chart</b>	<b>Title</b>	<b>Scale</b>	<b>Published</b>
IN 2075	7366	Tuticorin Harbour	Various	03-Aug-17

Published New Editions:

<b>GB Chart Number</b>	<b>INT Chart</b>	<b>Title</b>	<b>Scale</b>	<b>Published</b>
833	7442	Yangon River (Rangoon River) and Approaches	Various	27-Jul-17
265	7114	Bab El Mandeb and Golfe de Tadjoura	Various	03-Aug-17
3	7380	Chagos Archipelago	360,000	10-Aug-17
725	-	Plans in Chagos Archipelago	Various	10-Aug-17
726	-	Chagos Archipelago, Egmont Islands to Three Brothers	100,000	10-Aug-17
727	-	Peros Banhos to Blenheim Reef including Nelson's Island	100,000	10-Aug-17
823	7438	Pathein River to Yangon (Rangoon) River	300,000	17-Aug-17
826	7441	Yangon (Rangoon) River to Heinze Islands	300,000	17-Aug-17
2132	7138	Ports in the Gulf of Suez	Various	24-Aug-17
2133	7139	Approaches to Suez Bay (Bahr al Qulzum)	55,000	24-Aug-17
452	7117	Al Mukha to Bab el Mandeb	100,000	21-Sep-17
453	7116	Jazirat Jabal Zuqar to Muhabbaka Islands	100,000	21-Sep-17
1925	-	Jazirat Jabal Zuqar to Bab el Mandeb	200,000	21-Sep-17
2373	7136	Suez Bay (Bahr al Qulzum) to Ra's Sharatib	150,000	26-Oct-17
2374	7134	Ra's Sharatib to Juzur Ashrafi	150,000	26-Oct-17
263	7120	Port of Djibouti	10,000	23-Nov-17
143	7005	Jazirat at Ta'ir to Bab el Mandeb	Various	28-Dec-17
157	7006	Masamirit to Bab el Mandeb	750,000	28-Dec-17
452	7117	Al Mukha to Bab el Mandeb	100,000	28-Dec-17
453	7116	Jazirat Jabal Zuqar to Muhabbaka Islands	100,000	28-Dec-17
6	-	Gulf of Aden	750,000	04-Jan-18
265	7114	Bab El Mandeb and Golfe de Tadjoura	Various	04-Jan-18
1925	-	Jazirat Jabal Zuqar to Bab el Mandeb	200,000	04-Jan-18
2964	758	Gulf of Aden and Approaches	1,500,000	04-Jan-18
3661	7162	Bab el Mandeb to Aden Harbour	200,000	04-Jan-18
IN 3028	7404	Kamarajar Port	12,500	12-Apr-18
IN 3039	-	Kattupalli Port	12,500	12-Apr-18

**3.3** The following New Charts and New Editions are scheduled for publication in the next six months.

New Charts to be published:

GB Chart Number	INT Chart	Title
IN 31	756	Bay of Bengal - Northern Portion (Krishnapanam to Bassein River)
IN 210	-	Umargām to Satpati
IN 211	-	Satpati to Dighi Harbour
IN 255	7334	Approaches to Mumbai
IN 258	7348	Kundāpura to Badagara
IN 259	7356	Badagara to Kochi
IN 262	7365	Cape Comorin to Pāmban
IN 301	-	Approaches to Hugli River
IN 2002	7351	Ports of New Mangalore and Mangalore
IN 2039	-	Gulf of Khambhāt, Northern Portion
IN 2051	7333	Salaya Harbour
IN 2359	7350	Approaches to Port of New Mangalore
IN 3011	7421	Hugli River, Gasper Channel to Haldia

New Editions to be published:

GB Chart Number	INT Chart	Title
708	753	Maldives to Sri Lanka
1011	7377	Addoo Atoll to N. Huvadho Atoll
1012	7374	N. Huvadho Atoll to Mulaku Atoll
1013	7371	Mulaku Atoll to S. Maalhosmadulu Atoll
1014	7368	S. Maalhosmadulu Atoll to N. Thiladhunmathee Atoll
1583	7389	Little Basses Reef to Pulmoddai Roads
2067	7378	Addoo Atoll
2197	-	Palk Strait and Palk Bay, Eastern Part
IN 3037	-	Dhāmra Port
IN 3038	-	Approaches to Dhāmra Port

## Digital Charts



**3.4** 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.

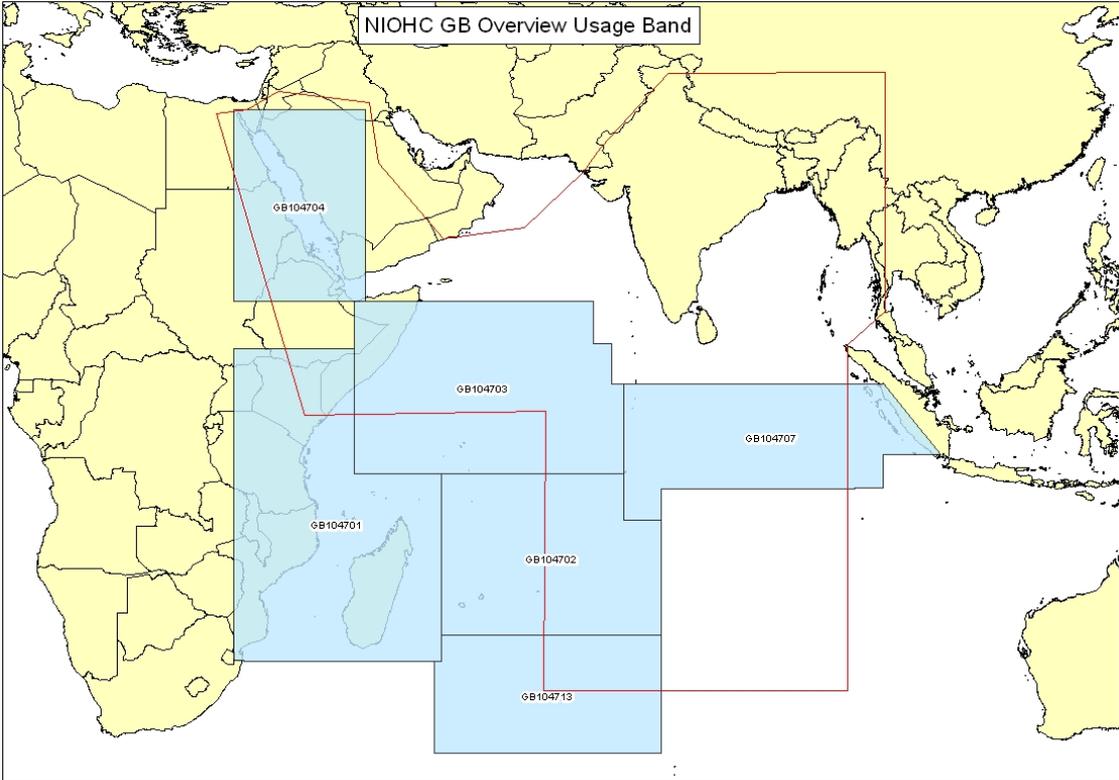
**ENCs**

**3.5** Within the NIOHC region, the UKHO has released a total of 134 ENC cells. The breakdown by usage band is shown in the table below:

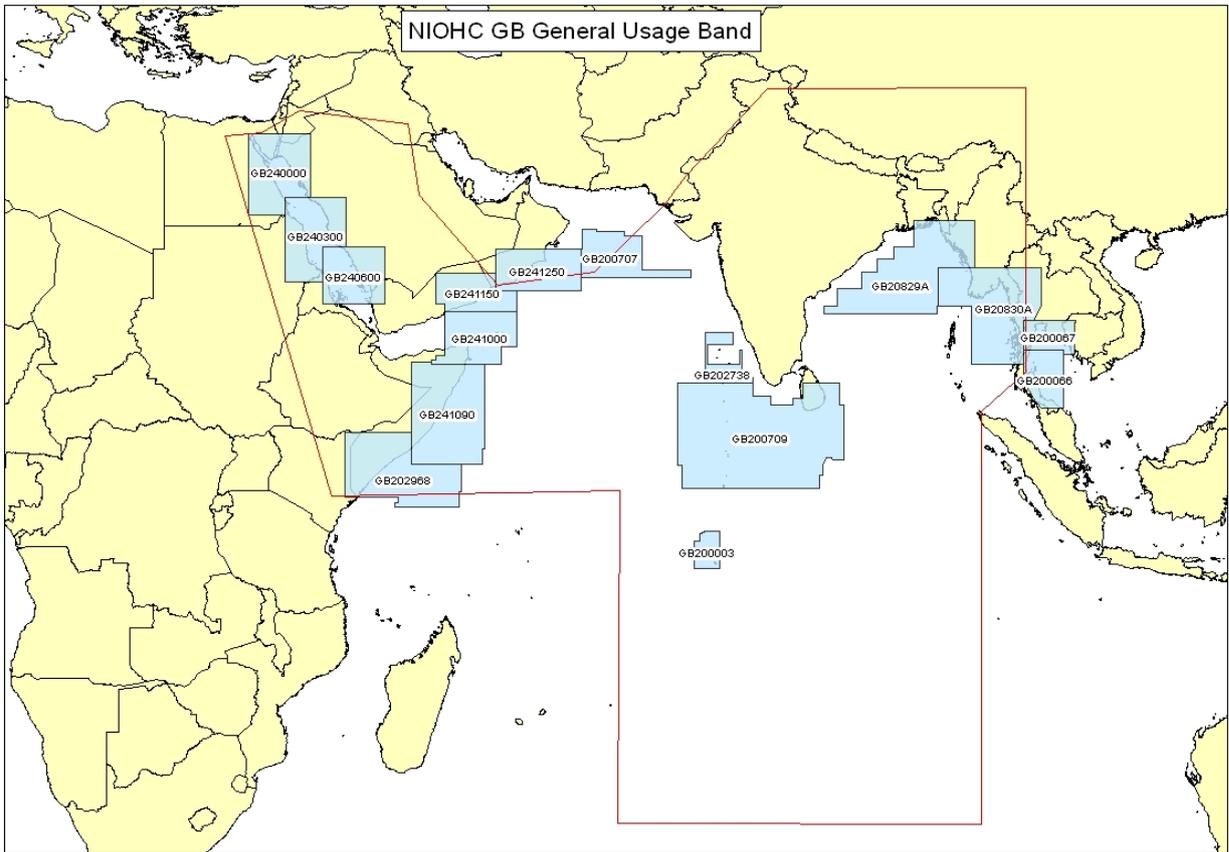
<b>NIOHC Region Released Cells</b>	
<b>ENC Usage Band</b>	<b>Number of GB ENCs</b>
Overview	6
General	16
Coastal	35
Approach	44
Harbour	32
Berthing	1
Total number of released ENCs	134

**ENC totals by usage band as produced by UKHO**

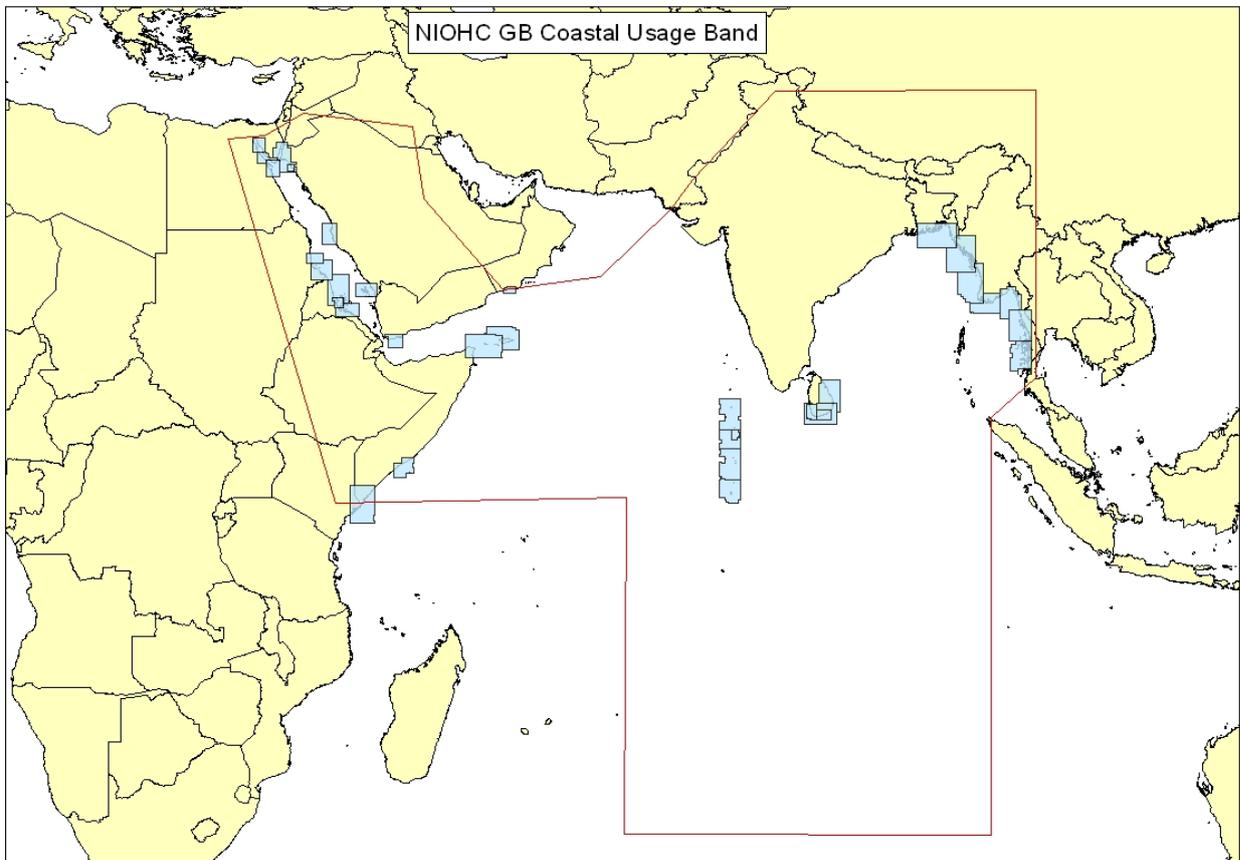
The subsequent diagrams illustrate the current coverage of GB ENCs within the NIOHC Region.



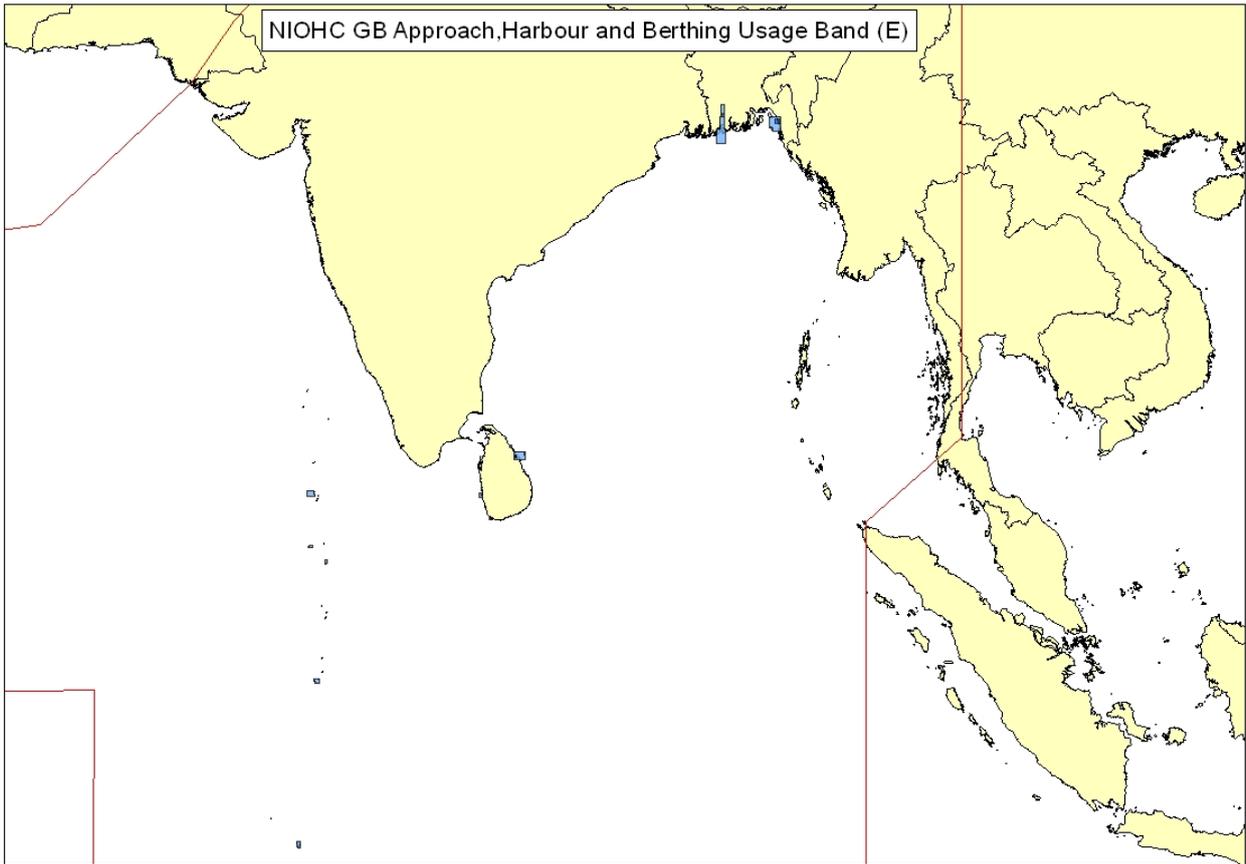
**UKHO produced GB overview ENCs**



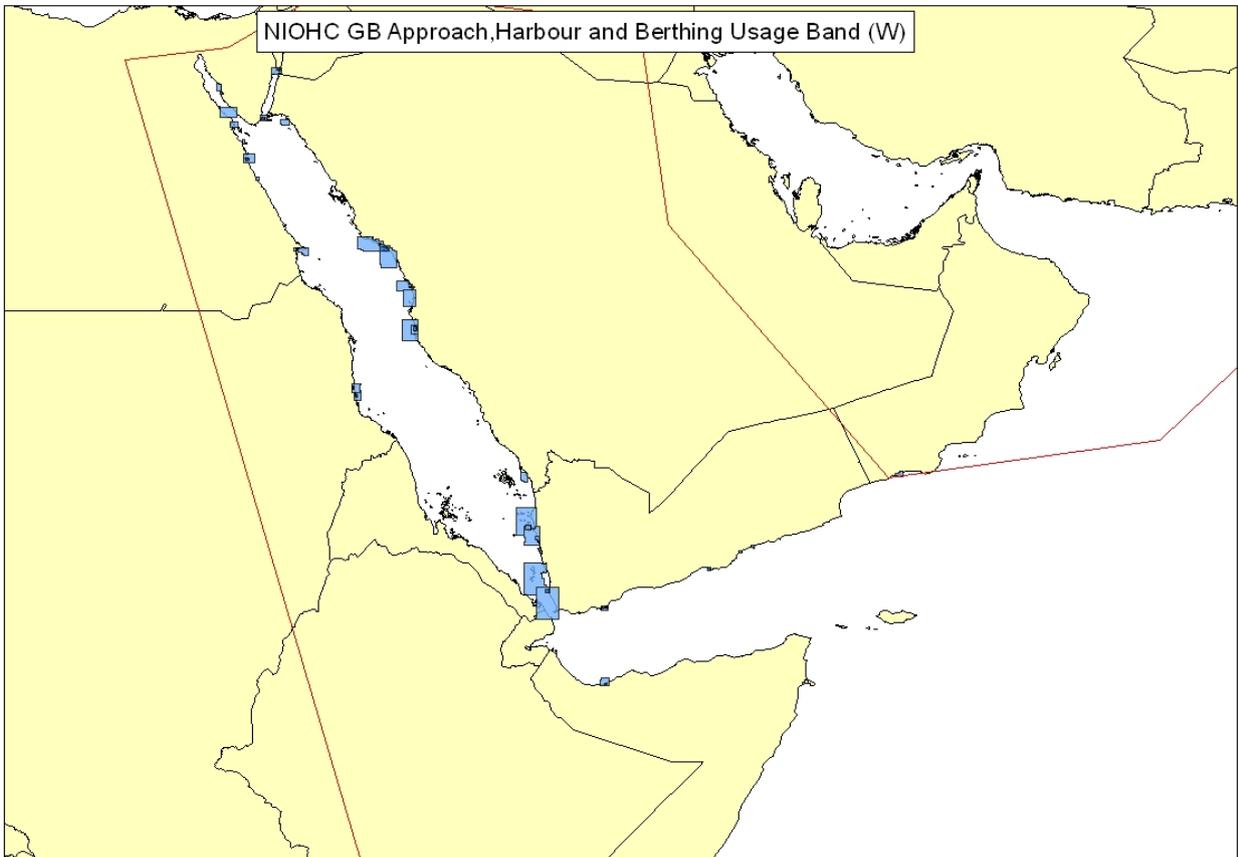
UKHO produced GB general ENC



UKHO produced GB coastal ENC



**UKHO produced GB approach, harbour and berthing ENC's (E)**



**UKHO produced GB approach, harbour and berthing ENC's (W)**

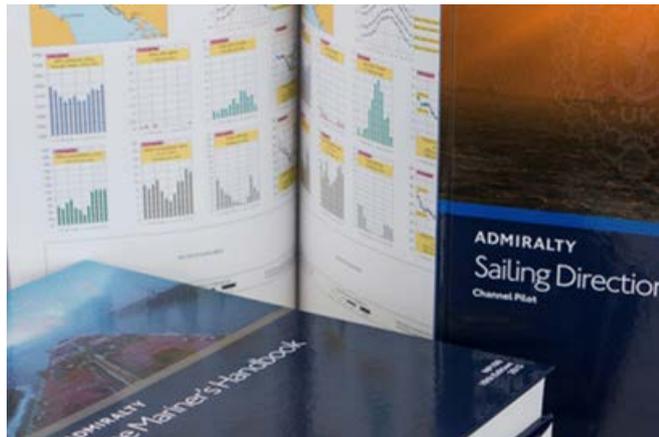
## ENC Distribution

**3.6** The UKHO, along with other European hydrographic offices, was a founder member of the International Centre for ENCs (IC-ENC) Regional ENC Co-ordination Centre (RENC). The IC-ENC concentrates its efforts on the validation and consistency of ENC data and leaves the marketing of ENCs to the shipping industry and to its value-added resellers (VARs) and chart agents. Additional details can be found on the IC-ENC website ([www.ic-enc.org](http://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 UKHO's Admiralty website ([www.admiralty.co.uk](http://www.admiralty.co.uk)).

## 4. PUBLICATIONS

### Paper Publications



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

NP3	Africa Pilot Vol 3	Last ed: 21/04/16
NP21	Bay of Bengal Pilot	Last ed: 30/01/14
NP38	West Coast of India Pilot	Last ed: 29/09/16
NP39	South Indian Ocean Pilot	Last ed: 06/04/17

- New Editions to be published:  
NP64 Red Sea and Gulf of Aden Pilot Last ed: 03/09/15 Next ed: 26/07/18  
(Subject to change)

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

## Digital Publications



**4.2** The UKHO continues to develop digital equivalents to its existing paper publications, to support the IMO mandation of ECDIS; these publications have advantages to the mariner of providing additional functionality and minimising the task of updating.

**4.3 Catalogue.** The Admiralty digital catalogue may be downloaded free from the UKHO's Admiralty website ([www.admiralty.co.uk](http://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 the ENC 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 NIOHC region is for its UK Overseas Territories, namely British Indian Ocean Territory (BIOT), which is an almost exclusively military facility.

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

**5.2 GMDSS.** coverage in the NIOHC region is generally modest and administrations should be encouraged to develop their capabilities and infrastructure further and to provide at least Phase One hydrographic capability to promulgate MSI in a timely and efficient manner through their National Co-ordinators in coastal regions, or to utilise the communication facilities of NAVAREA VIII and IX Co-ordinators as appropriate for navigational warnings.

**5.3 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.

## 6. C-55 LATEST UPDATE

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

**6.2** UK has also provided assistance to update C-55 entries to other countries, including Eritrea, Maldives, Seychelles, Somalia, Sudan, Yemen and Yemen Socotra Island, where the UKHO retains the primary charting responsibility, 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 and 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. UK will continue to contribute resources to both CBSC initiatives and to providing bilateral assistance.

**7.2** UK organised Advanced Chart Production courses for Bangladesh and Myanmar (delivered by CARIS & C-MAP respectively). In September 2017 NIOHC members joined members of the adjoining SAIHC in a joint MSI training course held in Fish Hoek, South Africa.

**7.3** UKHO has a post dedicated to International Training and Capacity Building. Its key aims are to ensure that capacity building is properly considered in UKHO activity and that UKHO's capacity building activities are fully coordinated. It acts as the initial point of contact for UKHO involvement in IHO capacity building activities, including UK involvement in regional hydrographic commission initiatives and IHO Capacity Building Sub Committee (CBSC) activities. Further information can be obtained from the International Training and Capacity Building Manager - Mr Jeff Bryant ([jeff.bryant@ukho.gov.uk](mailto:jeff.bryant@ukho.gov.uk)). Mr Jeff Bryant is also the Capacity Building Coordinator for the MACHC and SAIHC regions.

### Cartographic Training provided by UKHO



**7.4** The UKHO provides two annual CAT B accredited nautical cartography training opportunities to FGHO students. These are the IHO-NF CHART Project course which is funded by the Nippon Foundation and the newly established UKHO course. The following NIOHC students have benefitted from these opportunities:

- UKHO Course - Jan - Apr 2018: Matthew Heaven, Australia and Mr Rilmar Ridjal, Indonesia
- Nippon Course - Sept - Dec 2017: Mr Aree Hwanlabeh, Thailand and Mr Palihawadana Arachchige Perera, Sri Lanka

**7.5** A general description of training provided by UKHO is included in the UK Generic National Report. Further details of the training opportunities offered by the UKHO can be found on the UKHO website or by contacting the UKHO's International Training & Capacity Building Manager, Mr Jeff Bryant (see above for details).

## ENC Training and Assistance



**7.6** 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 Flag Officer Sea Training - Hydrography, Meteorology and Oceanography (FOST-HM)**

**7.7** Nationally and internationally certified courses delivered by FOST-HM in Plymouth, are described in the UK Generic National Report.

## **8. OCEANOGRAPHIC ACTIVITIES**

This is described in the UK Generic National Report.

## **9. OTHER ACTIVITIES**

### **UK Celebrations for World Hydrography Day**

The IHO theme for the 2017 World Hydrography day was

*"Mapping out seas, oceans and waterways - more important than ever"*

**9.1** The UK celebration of WHD 2017 was held as an evening reception at Lancaster House, London in July 2017. Guests were welcomed by the Rt. Hon. the Earl Howe, Minister of State for Defence, John Humphrey, the UKHO Chief Executive, and Rear Admiral Tim Lowe, UK National Hydrographer. The guests at this high-level networking opportunity event included; Mr Robert Ward, General Secretary of the International Hydrographic Organization, Vice-Admiral Ben Key, RN Fleet Commander and many representatives from Government, Ports, Harbours, maritime related commercial companies, Embassies and Consulates.

**9.2** The reception also saw Robert Ward presented with a gift of an 18th century chart, in recognition of his contributions to the hydrographic community during his period of office as President and Secretary General of the International Hydrographic Organization.

**9.3** As part of the events to mark the 2017 World Hydrography Day in June, the United Kingdom Hydrographic Office (UKHO) hosted an interactive family day around the theme of 'Getting to know the UKHO', which gave the opportunity for hundreds of parents and children to participate in fun hydrographic activities, as well as meet expert mariners and representatives from the UKHO. This year's event was expanded to include 'UKHO Archives' and 'Electronic Charting' exhibitions together with an outdoor Royal Navy exhibition, in the courtyard, which was very popular and acted as a link between the two events.

**9.4** In celebration of World Hydrography Day, the UK Hydrographic Office has established the Alexander Dalrymple Award in recognition of an individual's outstanding dedication and contribution to hydrography. The annual award is named in honour of Alexander Dalrymple FRS who, following orders from King George III in 1795, set up what is now the UK Hydrographic Office. Mr Adam Greenland, National Hydrographer, Land Information New Zealand was awarded the 2017 Alexander Dalrymple Award in recognition of his tireless contribution to the International Hydrographic Community, particularly for his leadership and driving force in the aid-funded Pacific Region Navigation Initiative (PRNI), which focused on navigation related aspects of maritime safety to support Pacific Island Countries fulfil their own SOLAS obligations. Mr Greenland was unable to attend the reception but his sister, Jessica Waterhouse accepted the award on his behalf-later awarded personally in NZ at the High Commission Residence.

### **Satellite Derived Bathymetry (SDB)**

**9.5** Following the 2014 trial of Satellite Derived Bathymetry (SDB) conducted in Antigua, the UKHO published our first chart (GB 2066) containing data collected using this technique in 2015. Whilst this was only made possible because the 'ground truth' reference data collected as part of the trial, allowed the uncertainties to be quantified; this does mark a step change for the UKHO and the way that unconventional data gathering techniques are used. The UKHO has since set up a framework contract that allows for the commissioning of SDB surveys. One SDB survey, in Tuvalu, South Pacific Ocean, has been carried out under this framework, mainly for reconnaissance purposes as no ground truth data was acquired. A number of other nations that fall under the UK OT and CME programmes are currently being assessed for further SDB work in 2018/19.

### **Broader UK Government Work**

**9.6 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, BIOT is in scope as the programme is initially focused on Territories which have designated, or committed to designating, large scale areas (>50% of their maritime zone, or of recognised international importance) for marine protection to ensure these areas are effectively managed and enforced.

### **Commonwealth Nations**

**9.7** From the 16-20th April 2018, London will host the Commonwealth Summit, culminating in the Commonwealth Heads of Government Meeting.

For the Hydrographic and Oceanographic communities, this provides an opportunity to highlight the importance of up-to-date and modern ocean data (in all forms) to help nations develop their blue and ocean economies, and ultimately prosper. During the summit, it is hoped that an event highlighting the CME Programme will be held on or around the 17th April 2018.

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

International Hydrographic Organisation		Chair/Vice Chair	Member
ABLOS	Advisory Board on Law of the Sea		x
CSBWG	Crowd-sourced Bathymetry Working Group		x
DPSWG	Data Protection Scheme Working Group	x	x
DQWG	Data Quality Working Group		x
ENCWG	ENC Standards Maintenance Working Group	x	x
GEBCO	General Bathymetric Chart of Oceans		x
HSSC	Hydrographic Services and Standards Committee		x
MSDIWG	Marine Spatial Data Infrastructure Working Group		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
WENDWG	Worldwide ENC Database Working Group	x	x
WWNWS	Worldwide Navigational Warning Service		x
International Hydrographic Organisation		Chair/Vice Chair	Member
HCA	Hydrographic Commission on Antarctica		x
MACHC	Meso American and Caribbean Sea Hydrographic Commission		x
MBSHC	Mediterranean and Black Seas Hydrographic Commission		x
NIOHC	North Indian Ocean Hydrographic Commission	x	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 Organisation		Chair/Vice Chair	Member
NCSR	Navigation, Communication, Search and Rescue		x
NAVTEX	NAVTEXT Coordination panel	x	x
DRWG	Document Review Working Group of NAVTEXT		x
International Association of Marine Aids to Navigation and Lighthouse Authorities		Chair/Vice Chair	Member
ENAV	E-navigation Committee		x
WVTSAB	World Vessel Traffic System Advisory Board		x
Other International Bodies		Chair/Vice Chair	Member
IAU	International Astronomical Union		x
CIRM	Comité International Radio-Maritime		x
BALTICO	Navarea1 member states meeting	x	
ISO	International Standards Organisation		x
OGC	Open Geospatial Consortium		x

## **10. CONCLUSION**

**10.1** 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.

**10.2** UK has a strong commitment to the Northern Indian Ocean and Red Sea areas, through its primary charting and through its continuing interest in developing regional hydrographic self-sufficiency through capacity building measures.

**10.3** There is a continuing challenge to link the scarce local data gathering resources into a broad programme of prioritised new charts and new editions.

**10.4** The provision of adequate ENC coverage, in support of the IMO carriage requirement for ECDIS that comes progressively into force from 2012, presents a significant challenge globally; the NIOHC is progressing ENC coverage.

**10.5** With a diverse range of shipping interests in the Region, improving the effective distribution of hydrographic publications and updates remains paramount.

**Taunton**

**March 2018**

## UKHO POINTS OF CONTACT

**UKHO Website:** [GOV.uk/UKHO](http://GOV.uk/UKHO)

The general UKHO address is:  
United Kingdom 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: [internationalrelations.ukho@ukho.gov.uk](mailto:internationalrelations.ukho@ukho.gov.uk)

Telephone: +44 (0)1823 484444

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

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From the Red Sea coast of Saudi Arabia to  
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For matters related to **Sailing Directions** within the SWPHC region, please contact:

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