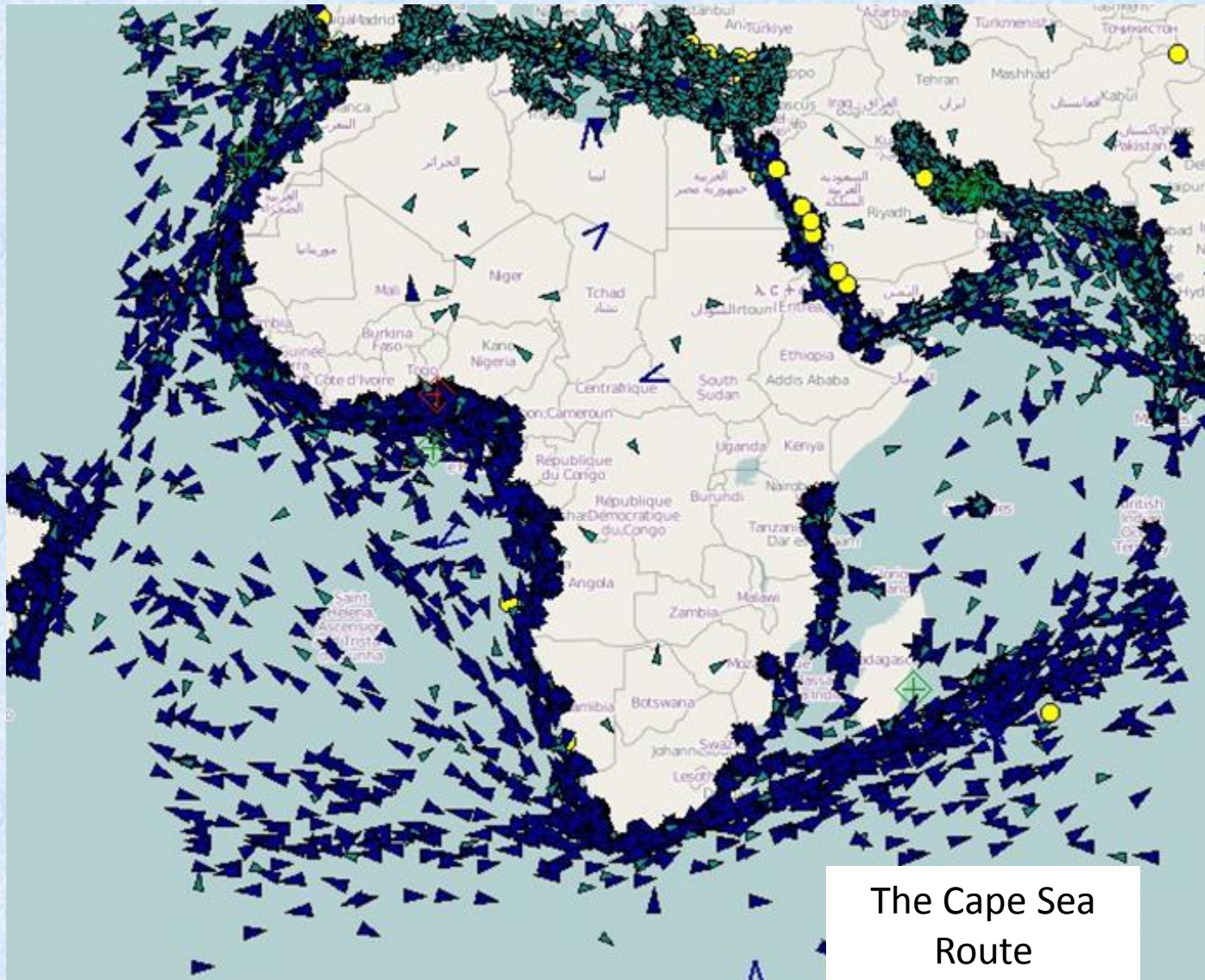


THE NEED FOR HYDROGRAPHY IN THE REGION



ABOUT US



The **South African Navy Hydrographic Office**

- **Hydrographic Service** was established in 1922 and the **Hydrographic Office** in 1955 and resides under the Minister of Defence
- South Africa is a member of the **International Hydrographic Organization (IHO)** since 1951
- is responsible to *produce navigational products and provide hydrographic services*

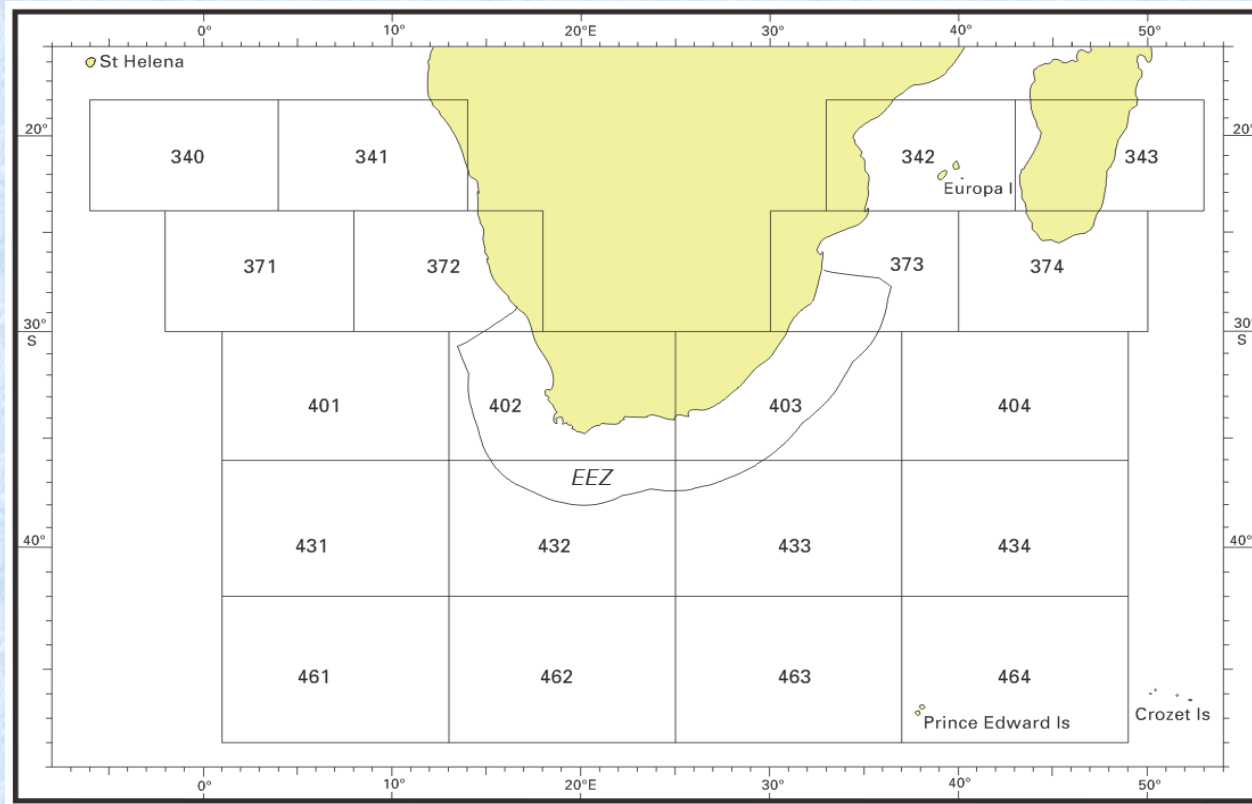
for safety of navigation in South Africa and Namibia for our **Navy** and the **Maritime Community** in general.

These products and services are based on **International IHO Standards** and meet the requirements of the IMO SOLAS Convention for the Safety of Life at Sea (2009).



World GEBCO 1: 1 Million Series

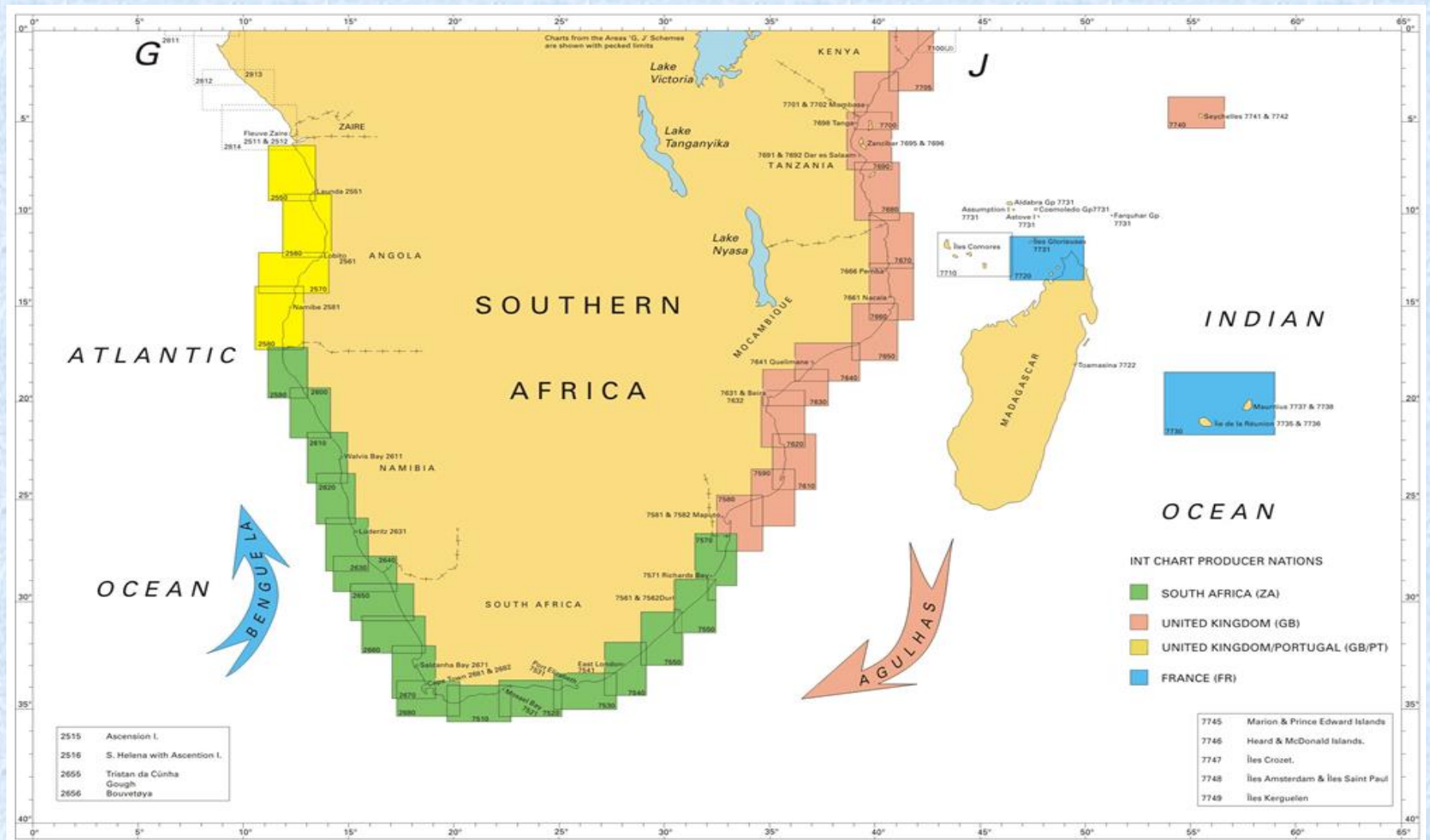
RSA's Bathymetric GEBCO Collector Sheet Area of Responsibility



Vessels of opportunity collect deep ocean soundings and these are sent via contributing hydrographic offices to the IHO World Data Centre for Bathymetry in Boulder Colorado, USA.

PAPER NAVIGATIONAL CHARTS

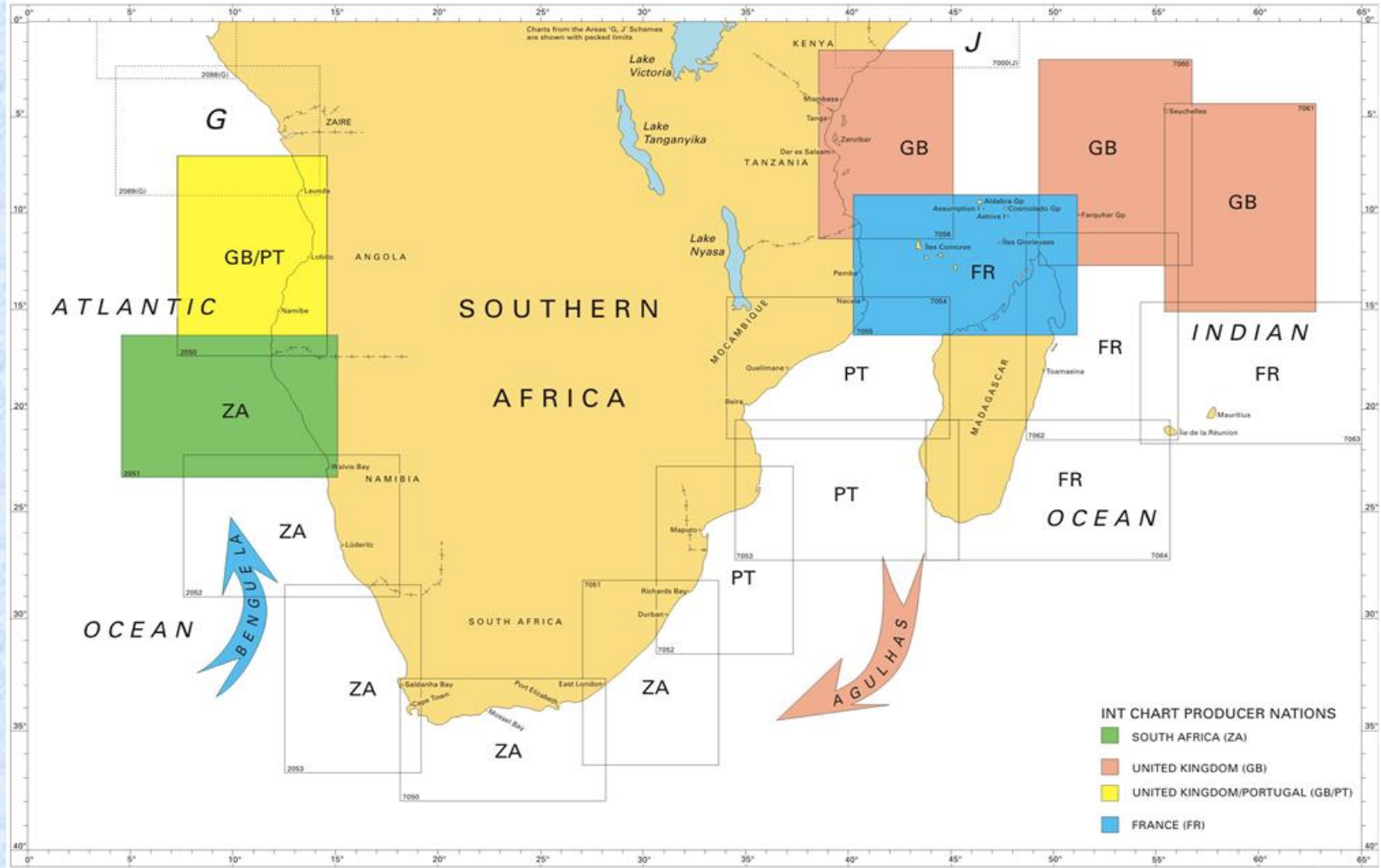
South Africa is the INT Chart Co-ordinator for Area H



PAPER NAVIGATIONAL CHARTS

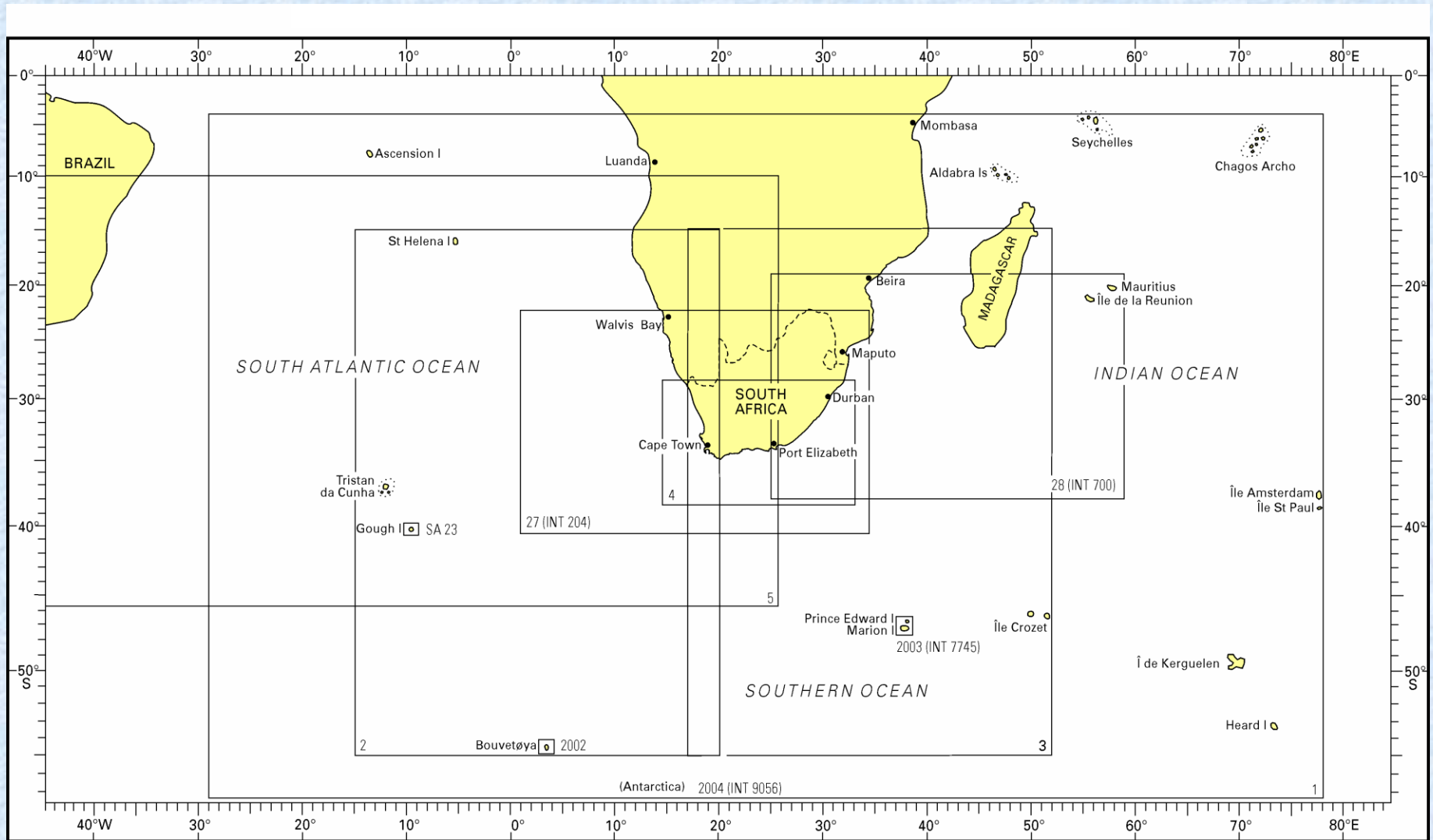
South Africa is the INT Chart Co-ordinator for Area H

CHARTING REGION H (1992 -)



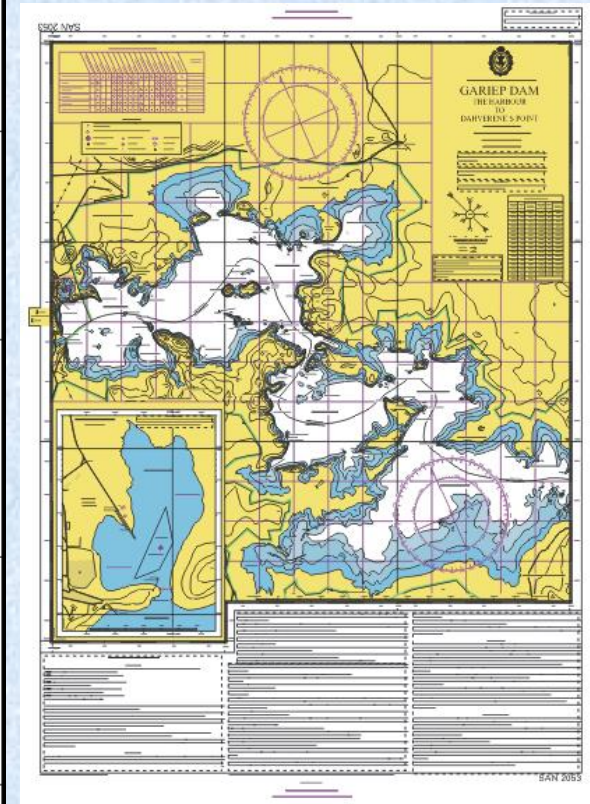
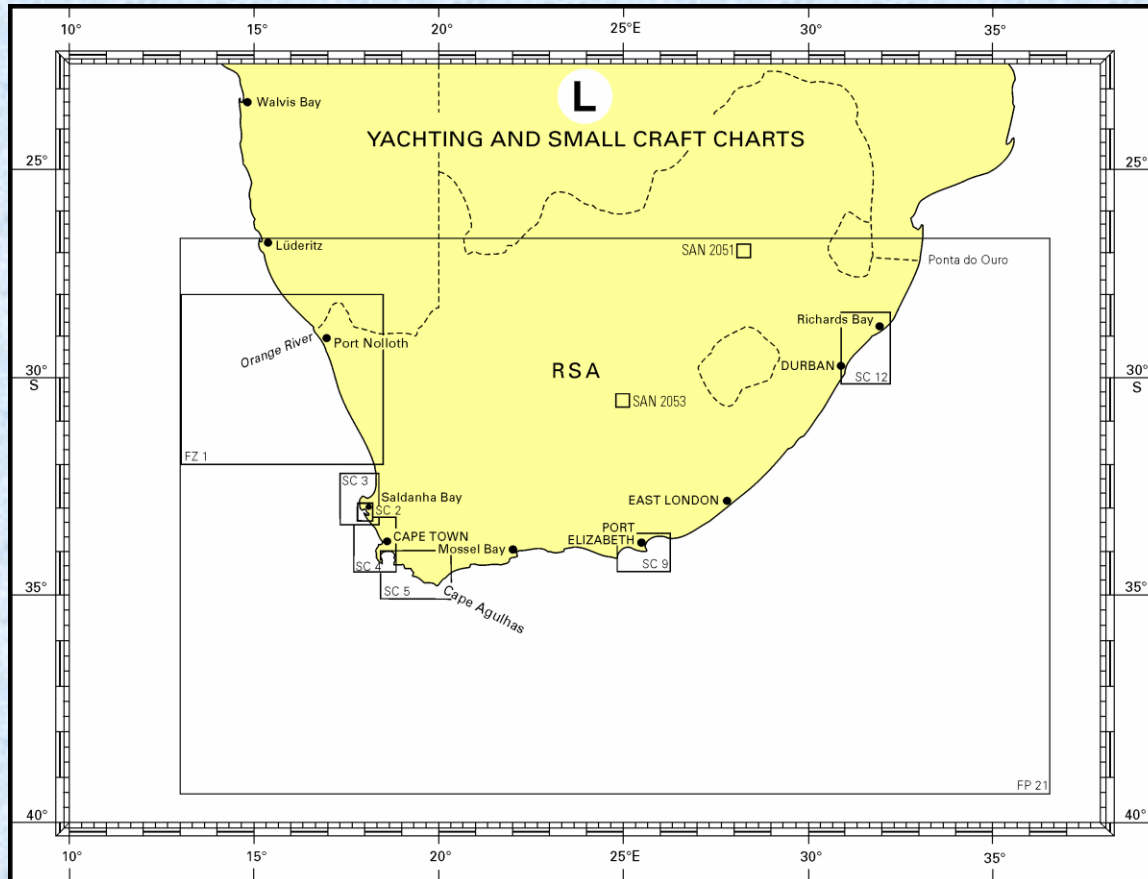
PAPER NAVIGATIONAL CHARTS

Small Scale (National & INT) Series



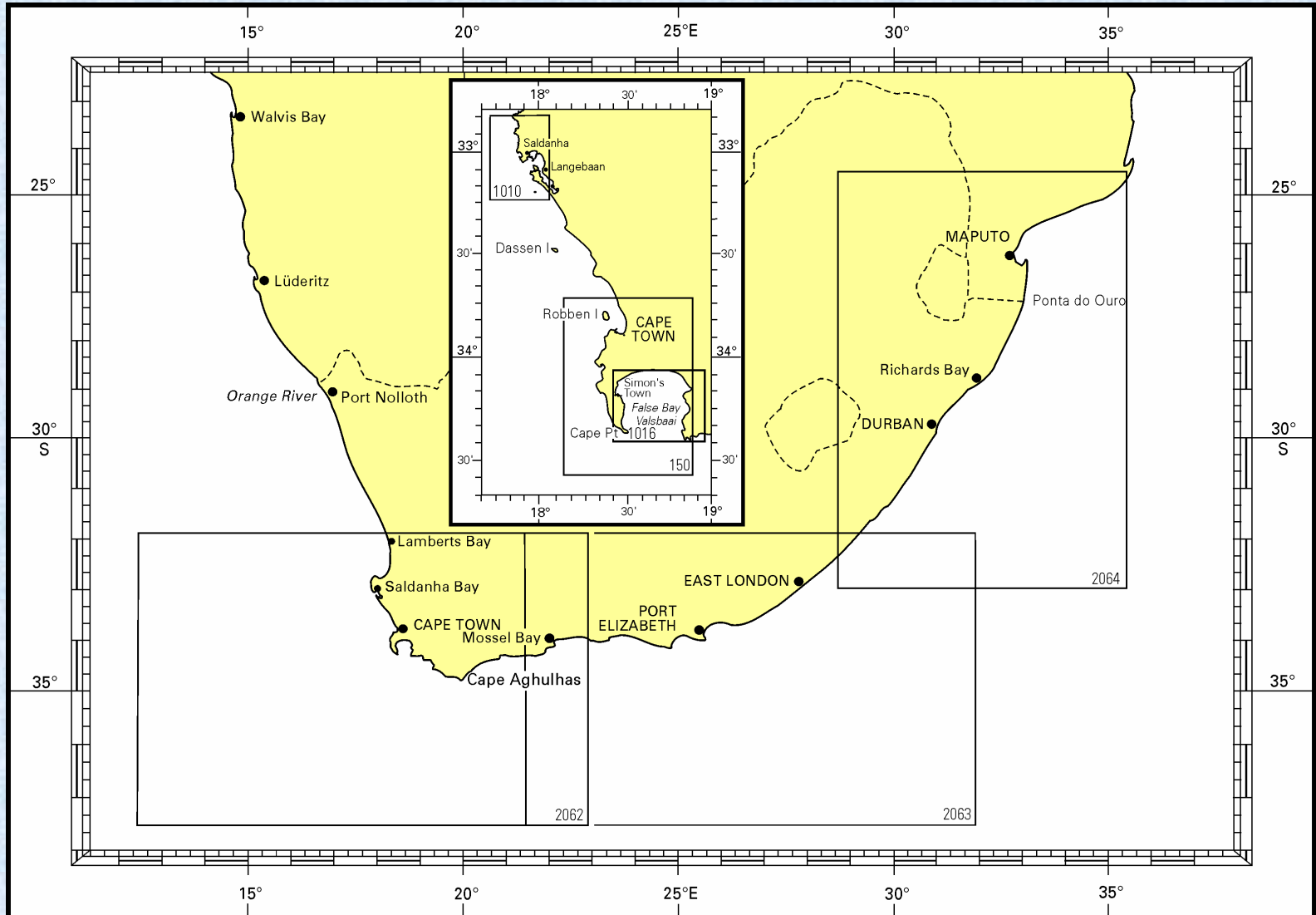
PAPER NAVIGATIONAL CHARTS

Yachting & Small Craft Series



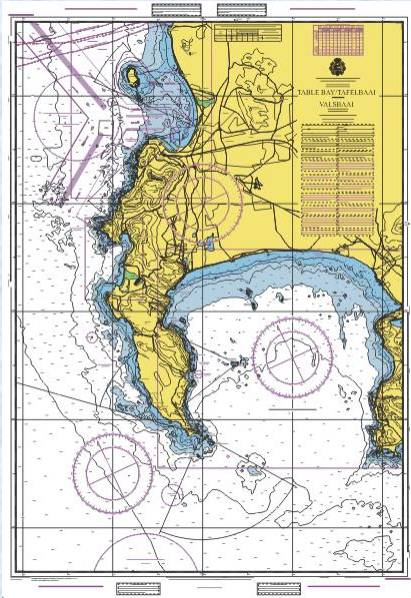
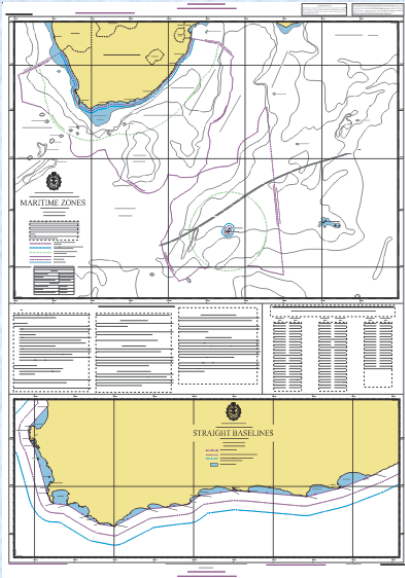
PAPER NAVIGATIONAL CHARTS

PEXA Series



PAPER NAVIGATIONAL CHARTS

Miscellaneous Paper Charts



FISHING PLOTTING SHEETS

CHART NO	CHART TITLE	SCALE 1:	PUBLICATION DATE	NEW EDITION DATE
SAN FZ 1	Fishing Zone Boundaries	600 000	Nov 1988	
SAN FP 21	Orange River to Ponta do Ouro (Fishing Reference Grid)	2 450 000	Mar 1995	

INFORMATION CHARTS

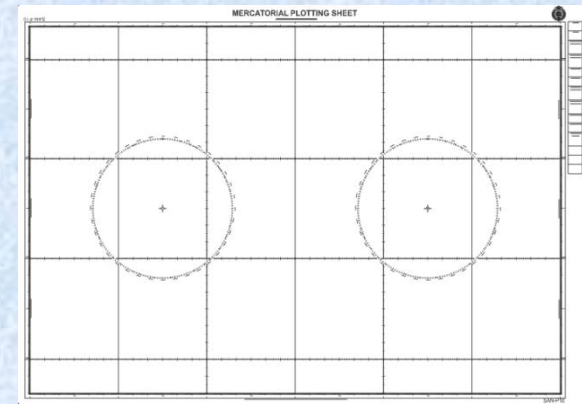
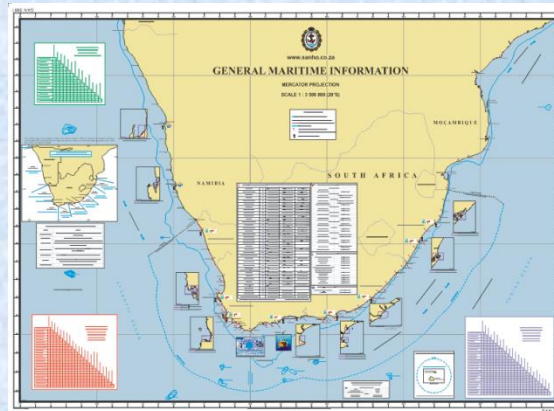
CHART NO	CHART TITLE	SCALE 1:	PUBLICATION DATE	NEW EDITION DATE
SAN 3001	General Maritime Information	3 500 000	May 2011	
SAN MZ 1	Maritime Zones	7 500 000	Oct 2014	

INSTRUCTIONAL CHARTS

CHART NO	CHART TITLE	SCALE 1:	PUBLICATION DATE	NEW EDITION DATE
SAN 3002	Table Bay to Valsbaai	100 000	Nov 1981	Nov 1999

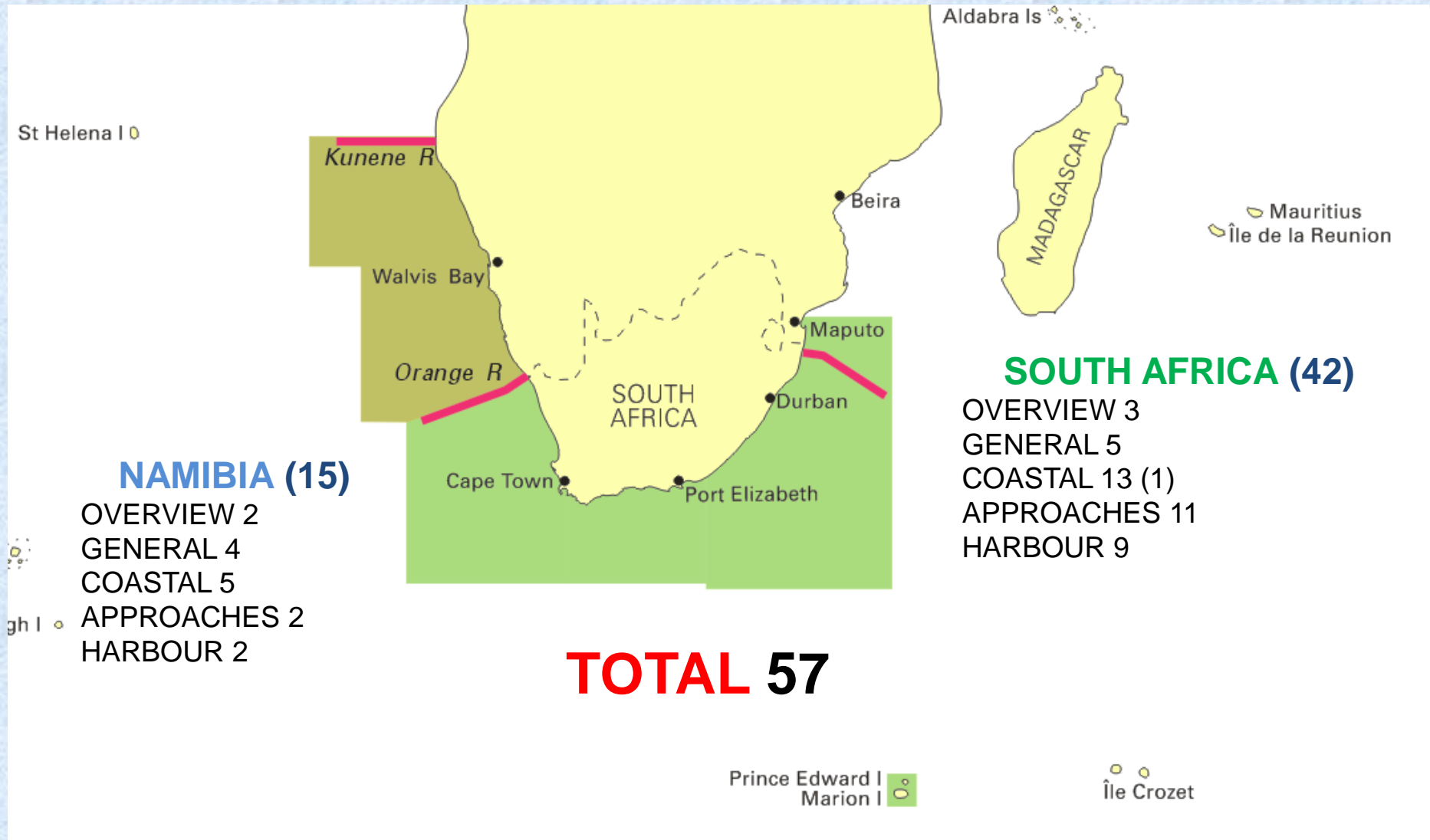
PLOTTING SHEETS

CHART NO	CHART TITLE	SCALE 1:	CHART No	CHART TITLE	SCALE 1:
SAN P1	Mercator Plotting Sheet Lat 0°- 3°	670 000	SAN P9	Mercator Plotting Sheet Lat 24°- 27°	670 000
SAN P2	Mercator Plotting Sheet Lat 3°- 6°	670 000	SAN P10	Mercator Plotting Sheet Lat 27°- 30°	670 000
SAN P3	Mercator Plotting Sheet Lat 6°- 9°	670 000	SAN P11	Mercator Plotting Sheet Lat 30°- 33°	670 000
SAN P4	Mercator Plotting Sheet Lat 9°- 12°	670 000	SAN P12	Mercator Plotting Sheet Lat 33°- 36°	670 000
SAN P5	Mercator Plotting Sheet Lat 12°- 15°	670 000	SAN P13	Mercator Plotting Sheet Lat 36°- 39°	670 000
SAN P6	Mercator Plotting Sheet Lat 15°- 18°	670 000	SAN P14	Mercator Plotting Sheet Lat 39°- 42°	670 000
SAN P7	Mercator Plotting Sheet Lat 18°- 21°	670 000	SAN P15	Mercator Plotting Sheet Lat 42°- 45°	670 000
SAN P8	Mercator Plotting Sheet Lat 21°- 24°	670 000	SAN P16	Mercator Plotting Sheet Lat 45°- 48°	670 000
SAN P21	Dead Reckoning and Position Line Plotting Diagram	670 000	SAN P22	Plotting Diagram - Half Sheet	670 000



ELECTRONIC NAVIGATIONAL CHARTS

Portfolio of ENCs



PUBLICATIONS

SANHO-1 LIST OF LIGHTS

SOUTH AFRICAN HYDROGRAPHIC OFFICE
LIST OF LIGHTS
 FOG SIGNALS, RADIO NAVIGATIONAL AIDS
 AND RADIO SERVICES

ESTABLISHED AS AIDS TO NAVIGATION ON
 THE COASTS OF THE REPUBLIC OF SOUTH AFRICA,
 NAMIBIA AND MOÇAMBIQUE



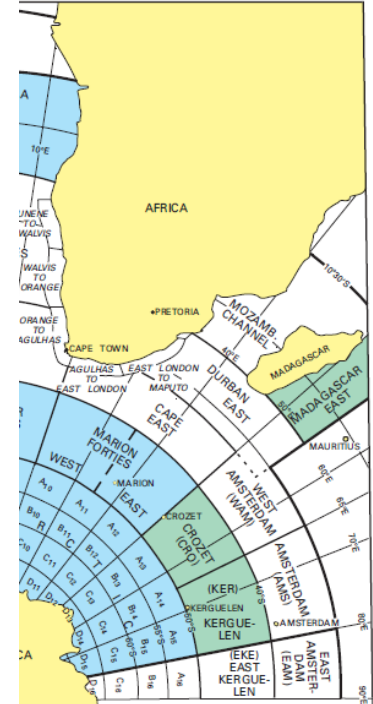
2011 Edition

ISBN 978-0-9869717-2-3

Number	Name	Position S E	Characteristic Candle	Dev m	Range M	Description	Remarks
NGOURA HARBOUR							
Entrance Channel Leading Lights 342°24'							
	Ic.W.3s	71	7			□ Painted fluorescent orange with white vertical stripe on lattice tower, red and white bands (51)	Daytime Lt. # 2.0, ec 1.0
	Ic.W.8s	104	8			□ Painted fluorescent orange with white vertical stripe on lattice tower, red and white bands (80)	Daytime Lt. # 4.0, ec 2.0
	I.R.2s	18	7			Steel pole (11)	
	I.R.	12	-			Steel pole (8)	Strip Lt
	I.G.	12	-			Steel pole (8)	Strip Lt
	I.R.	12	-			Steel pole (8)	Strip Lt
5 009°30'							
	Ic.W.4s	58	6			□ Painted fluorescent orange. Lattice tower, red and white bands (7)	Daytime Lt
	Ic.R.4s	38	4			□ Painted fluorescent orange. Lattice tower, red and white bands (18)	Daytime Lt
	I.G.	19	14			Round concrete structure with padom (11)	
	Iam M4 N20s	-	-			-	bl 6, sl 2, bl 2, sl 10 Sounded when fog is detected by the fog detector.
	I.G.2s	16	7			Steel pole (8)	
	I2W.20s 1 485 000	30	27			Red square masonry tower, two white bands, white cross on N and S sides (26)	fl 0.5, ec 2.2, fl 0.5, ec 16.8
	I.R.	9	5			Squat lattice tower (4)	fl 0.3, ec 0.7
	I.G.	9	5			Pole (3)	fl 0.3, ec 0.7
	I.W.10s 1 000 000	85	30			White 8-sided tower, black stripes, red dome (9)	fl 0.5
	I4W.40s 1 250 000	55	28			White round masonry tower, red dome (19)	fl 0.5, ec 4.2, fl 0.5, ec 4.2, fl 0.5, ec 25.4 Vis 235° - 233° (068°)
	I.R.2s 17 740	16	16			White concrete tower	fl 0.020, ec 1.562
	Iam M4 Q30s	-	-			-	bl 2.5, sl 2, bl 2.5, sl 2, bl 1, sl 2, sl 2.5, sl 15.5
	I.W.	-	-			White square concrete tower	Vis 044° - 224° (180°)

SECTION 3 - RADIO SERVICES

S FOR SHIPPING - METAREA VII

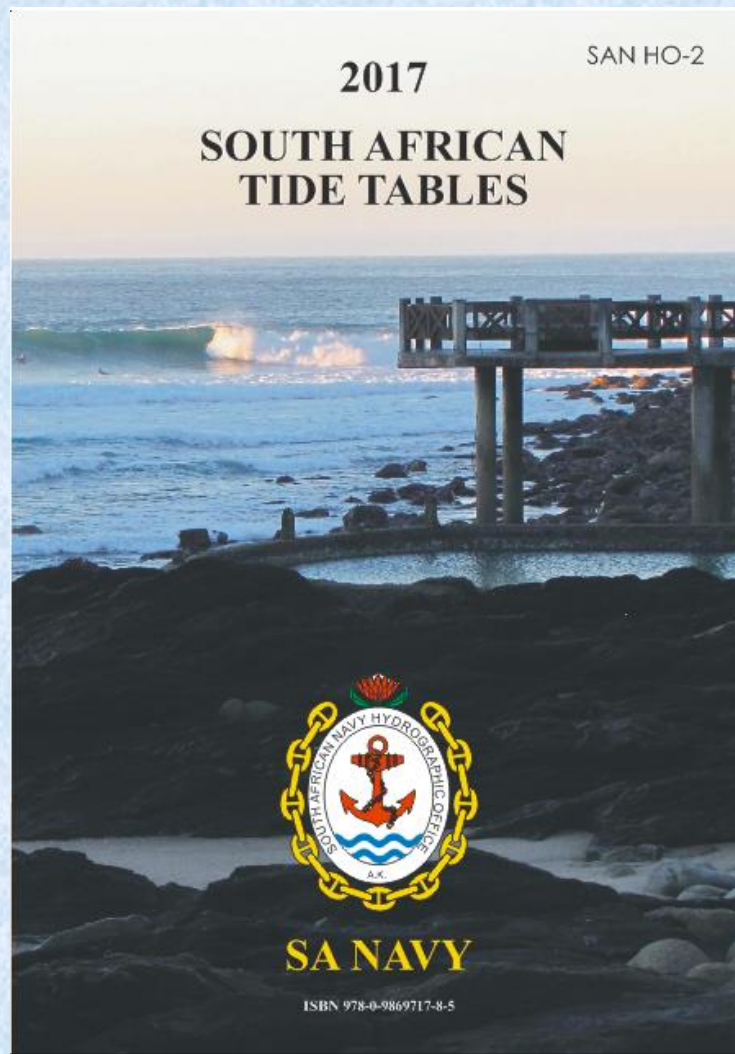


in request Weather Forecasts via Coastal Radio Stations

in request Weather Forecasts via Satellite

PUBLICATIONS

SANHO-2 TIDE TABLES



SIMON'S TOWN
OCTOBER 2016

Day	Times of												Moonrise	Moonset	Moon Phase
	Sunrise	Sunset	High Water				Low Water								
			time	height	time	height	time	height	time	height					
1	0624	1848	0317	1.69	1526	1.78	0915	0.27	2138	0.26	0642	1919	●		
2	0623	1849	0346	1.69	1554	1.76	0942	0.29	2205	0.28	0715	2013			
3	0621	1850	0415	1.66	1622	1.72	1009	0.32	2231	0.32	0748	2106			
4	0620	1851	0443	1.61	1650	1.65	1037	0.38	2259	0.38	0823	2200			
5	0619	1851	0512	1.55	1719	1.57	1107	0.45	2330	0.45	0900	2252			
6	0618	1852	0544	1.46	1752	1.46	1141	0.54	----	----	0940	2343			
7	0616	1853	0621	1.37	1832	1.35	0005	0.54	1223	0.65	1023	----			
8	0614	1853	0714	1.27	1932	1.25	0051	0.64	1324	0.75	1111	0034			
9	0613	1854	0844	1.21	2115	1.20	0204	0.73	1509	0.80	1202	0122	☾		
10	0611	1855	1034	1.25	2257	1.26	0358	0.75	1651	0.74	1258	0209			
11	0610	1856	1145	1.38	----	----	0525	0.66	1758	0.61	1357	0253			
12	0609	1857	0003	1.39	1234	1.54	0620	0.53	1846	0.45	1459	0336			
13	0607	1857	0052	1.54	1315	1.70	0704	0.39	1928	0.29	1604	0417			
14	0606	1858	0135	1.68	1355	1.85	0743	0.26	2009	0.15	1711	0457			
15	0605	1859	0217	1.79	1434	1.96	0822	0.16	2049	0.05	1820	0538			
16	0603	1900	0257	1.87	1515	2.02	0902	0.11	2130	0.01	1930	0619	☽		
17	0602	1901	0339	1.90	1556	2.02	0943	0.11	2213	0.03	2040	0703			
18	0601	1901	0421	1.86	1639	1.94	1026	0.16	2257	0.11	2149	0751			
19	0600	1902	0505	1.78	1725	1.80	1112	0.27	2344	0.24	2255	0842			
20	0559	1902	0553	1.66	1816	1.63	1204	0.41	----	----	2356	0936			
21	0558	1903	0647	1.52	1917	1.45	0036	0.39	1309	0.56	----	1034			
22	0556	1904	0758	1.40	2039	1.31	0140	0.55	1436	0.67	0052	1133	☾		
23	0555	1905	0932	1.34	2216	1.27	0304	0.65	1618	0.69	0141	1232			
24	0554	1906	1102	1.38	2337	1.32	0438	0.67	1741	0.63	0224	1331			
25	0553	1907	1207	1.46	----	----	0551	0.62	1837	0.54	0303	1428			
26	0552	1908	0034	1.41	1252	1.55	0642	0.54	1918	0.46	0339	1524			
27	0551	1908	0116	1.49	1328	1.63	0720	0.48	1951	0.39	0412	1619			
28	0550	1909	0152	1.56	1400	1.69	0752	0.42	2019	0.34	0445	1713			
29	0549	1910	0224	1.62	1430	1.72	0821	0.38	2046	0.30	0517	1807			
30	0548	1911	0254	1.66	1459	1.74	0849	0.36	2113	0.28	0549	1901	●		
31	0547	1912	0323	1.67	1528	1.73	0917	0.35	2140	0.28	0623	1954			

All times refer to SA Local Time

(Weekends are Highlighted)

PUBLICATIONS SAN HO-3 CHART CATALOGUE

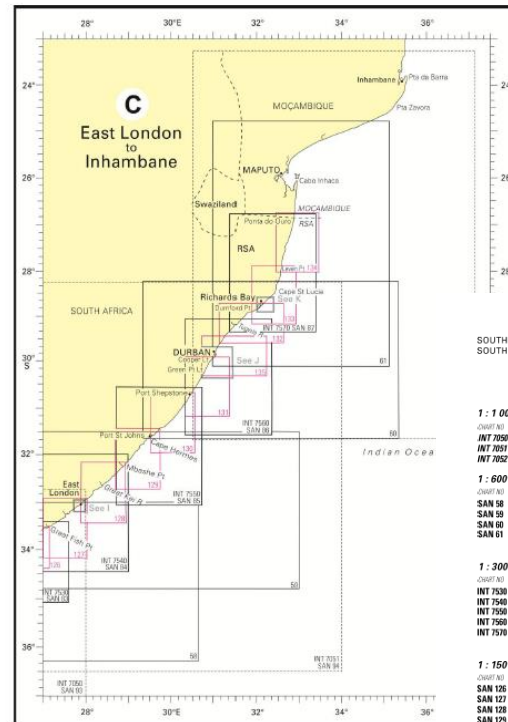
SAN HO-3



SOUTH AFRICAN NAVY HYDROGRAPHIC OFFICE

CATALOGUE AND INDEXES OF SAN CHARTS AND HYDROGRAPHIC PUBLICATIONS

2011 Edition



14

SOUTHERN AFRICA
SOUTH AFRICA - SOUTH EAST and EAST COASTS

EAST LONDON TO INHAMBANE

PAPER CHARTS

1 : 1 000 000 INTERNATIONAL SERIES

CHART NO	CHART TITLE	N (LAT 0)	S (LAT 0)	W (LONG 0)	E (LONG 0)	PUB DATE	N (DATE)
INT 7050 SAN 57	Table Bay to East London						
INT 7051 SAN 58	East London to Richards Bay						
INT 7052 SAN 55	Durban to Inhambane						

1 : 600 000 NATIONAL SERIES

CHART NO	CHART TITLE	N (LAT 0)	S (LAT 0)	W (LONG 0)	E (LONG 0)	PUB DATE	N (DATE)
SAN 56	Cape St Francis to East London	33°00' 00"	36°15' 48"	24°40' 00"	30°40' 00"	Jul 1977	
SAN 59	Great Fish Point to Port St Johns	31°20' 00"	34°48' 14"	27°00' 00"	32°00' 00"	Jul 1977	
SAN 60	Port St Johns to Cape St Lucia	28°13' 42"	31°40' 00"	29°20' 00"	30°20' 03"	Feb 1976	
SAN 61	Durban to Maputo	24°47' 06"	30°00' 00"	31°00' 00"	35°06' 15"	Nov 1976	

1 : 300 000 INTERNATIONAL SERIES

CHART NO	CHART TITLE	N (LAT 0)	S (LAT 0)	W (LONG 0)	E (LONG 0)	PUB DATE	N (DATE)
INT 7530 SAN 83	Cape St Francis to Great Fish Point	33°25' 00"	35°03' 23"	24°38' 00"	27°38' 01"	Mar 1989	Nov 2000
INT 7530 SAN 84	Great Fish Point to Mbashe Point	32°00' 00"	34°27' 00"	27°00' 00"	29°01' 00"	Apr 2005	
INT 7530 SAN 85	Mbashe Point to Port Shepstone	30°05' 00"	33°04' 30"	26°44' 00"	30°45' 00"	Jul 2012	
INT 7530 SAN 86	Port Shepstone to Tugela River	29°05' 00"	31°53' 00"	30°20' 00"	32°20' 00"	May 2013	
INT 7570 SAN 87	Tugela River to Ponta do Ouro	28°47' 00"	29°22' 31"	31°22' 00"	33°23' 16"	Jul 2001	

1 : 150 000 NATIONAL SERIES

CHART NO	CHART TITLE	N (LAT 0)	S (LAT 0)	W (LONG 0)	E (LONG 0)	PUB DATE	N (DATE)
SAN 126	Port Elizabeth to Great Fish Point	33°30' 00"	34°21' 34"	25°25' 00"	27°00' 00"	Apr 1975	Apr 2002
SAN 127	Great Fish Point to East London	32°55' 12"	34°11' 12"	26°58' 00"	28°01' 48"	Feb 1976	Dec 2000
SAN 128	East London to Mbashe River	32°10' 00"	33°26' 15"	27°53' 00"	28°56' 23"	Nov 1976	
SAN 129	Mbashe River to Port St Johns	31°27' 00"	32°43' 18"	28°42' 00"	29°44' 55"	Jul 1979	
SAN 130	Port St Johns to Port Shepstone	30°42' 00"	31°58' 19"	29°31' 00"	30°33' 25"	Oct 1979	
SAN 131	Port Shepstone to Cooper Light	29°55' 00"	31°11' 19"	30°20' 00"	31°21' 55"	Sep 1982	
SAN 132	Tongaat Buft to Richards Bay	29°45' 00"	29°08' 34"	31°08' 00"	32°21' 17"	Sep 1982	Jul 2001
SAN 133	Dunford Point to Leven Point	27°54' 42"	29°11' 00"	31°53' 15"	32°54' 00"	Jun 1974	Jul 2002
SAN 134	Leven Point to Ponta do Ouro	26°48' 12"	29°01' 12"	32°27' 00"	33°28' 48"	Nov 1975	Mar 2004
SAN 135	Alwood Shoal to Tongaat Buft	29°08' 27"	30°20' 00"	30°43' 00"	32°12' 56"	Sep 1982	Jul 2002

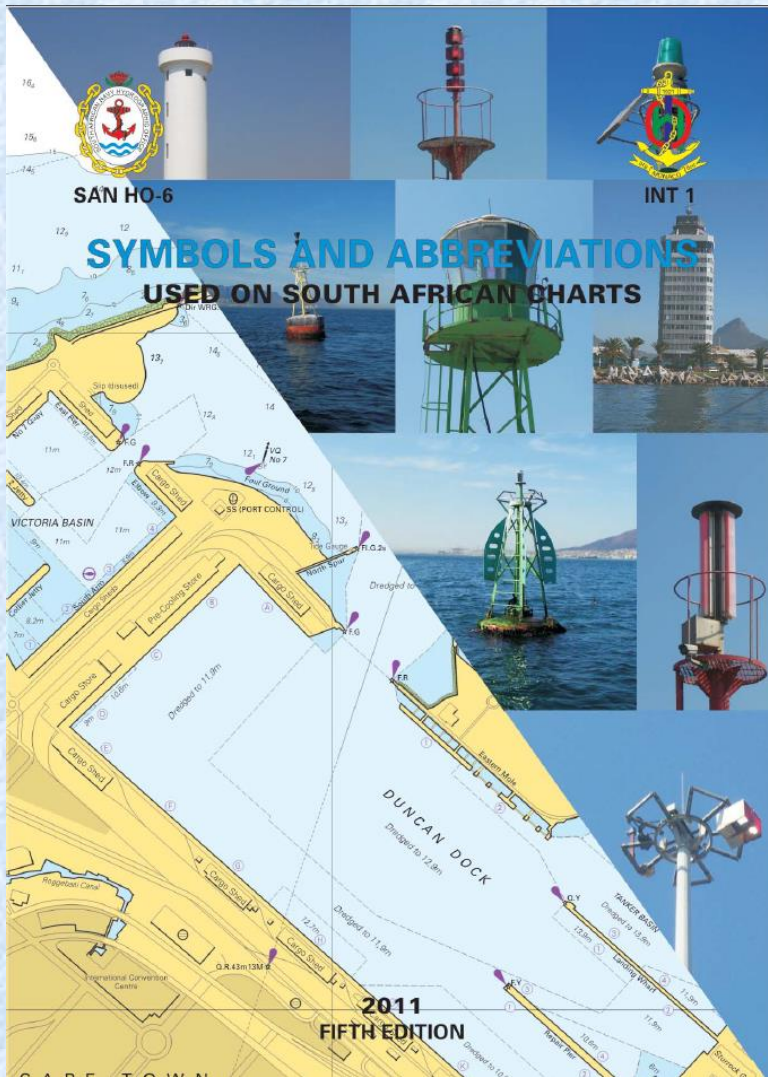
NOTES

- Chart numbers in bold upright style are published WGS84 based charts e.g. **SAN 38**
- Chart numbers in bold italic style are unpublished WGS84 based charts e.g. *INT 7050 SAN 57*
- For East London see Panel 1, for Durban see Panel 2 and for Richards Bay see Panel 3.

15

PUBLICATIONS

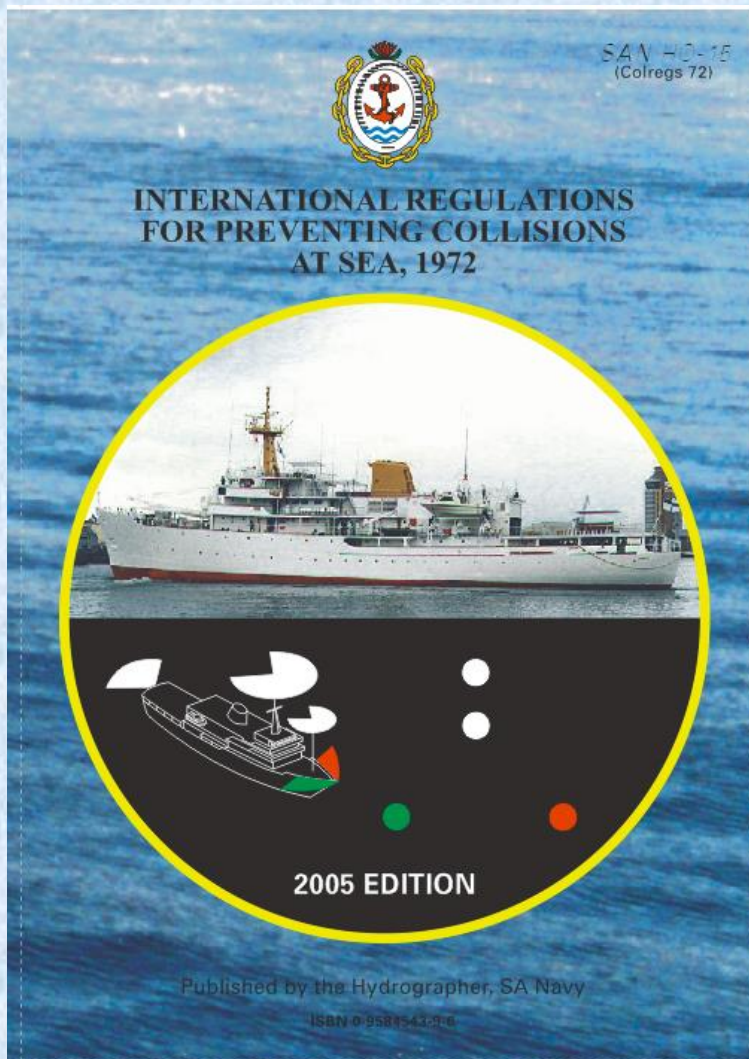
SANHO-6 SYMBOLS AND ABBREVIATIONS



F Ports

12		Mole (with berthing facility)		321.3
13		Quay, Wharf		321.1
14		Pier, Jetty		321.2 321.4
15		Promenade pier		321.2
16		Portico		326.9
17		Landing for boats		324.2
18		Steps, Landing stairs		
19.1		Designation of berth		323.1
19.2		Visitor's berth		323.2
20		Dolphin		327.1
21		Deviation dolphin		327.2
22		Minor post or pile		327.3
23		Slipway, Patent slip, Ramp		324.1
24		Gridiron, Scrubbing grid		326.8
25		Dry dock, Graving dock		326.1
26		Floating dock		326.2
27		Non-tidal basin, Wet dock		326.3
28		Tidal basin, Tidal harbour		326.4

PUBLICATIONS SAN HO-15 COLREGS



INTERNATIONAL REGULATIONS FOR PREVENTING COLLISION AT SEA, 1972

PART A - GENERAL

Application

These Rules shall apply to all vessels upon the high seas and in all waters therewith navigable by seagoing vessels.

These Rules shall interfere in the operation of special rules made by the appropriate authority for roadsteads, harbours, rivers, lakes or inland waters connected with the high seas and navigable by seagoing vessels. Special rules shall conform as closely as possible to these Rules.

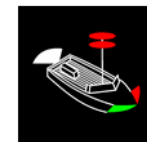
These Rules shall interfere with the operation of any special rules adopted by the Government of any State with respect to additional stationing or lights or shapes or whistle signals for ships of war and vessels engaged under convoy, or with respect to additional stationing or signal lights or whistle signals for fishing vessels fishing as a fleet. These additional stationing or signal lights or whistle signals shall, so far as possible, be such that they cannot be confused with any light, shape, or signal authorized elsewhere under these Rules.

Arrangements for special preparation schemes may be adopted by the Organization of Maritime States provided that such arrangements are approved by the International Maritime Organization (IMO) for the purpose of these Rules.

When the Government concerned shall have determined that a vessel of a particular construction or purpose cannot comply fully with the provisions of these Rules with respect to number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signalling appliances, such vessel shall comply with such other provisions in respect to number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signalling appliances, as her Government shall have determined to be the closest possible compliance with these Rules in respect to that vessel.

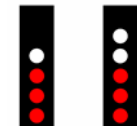
IAPEs (From Ahead)

A vessel will display its



and anchor lights, for the vessels engaged in a vertical line.

A vessel will display the sternlight in addition to the

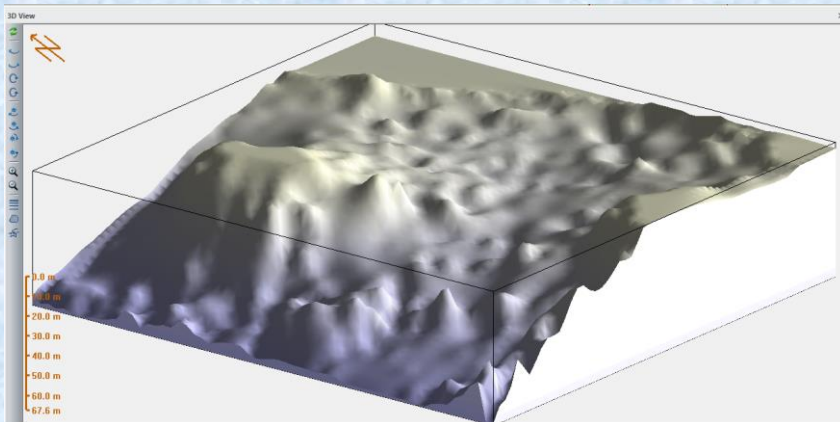
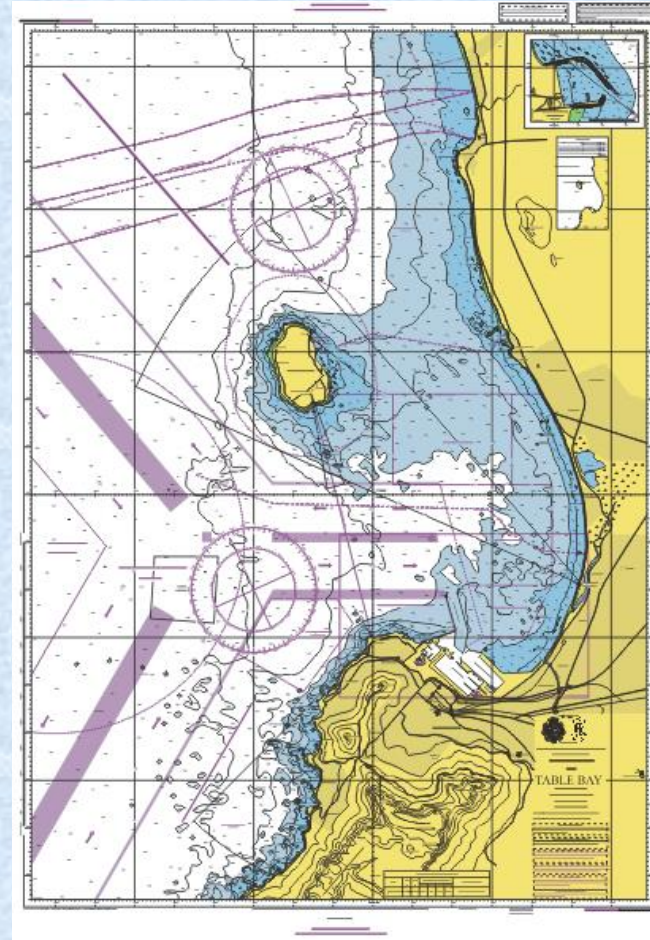
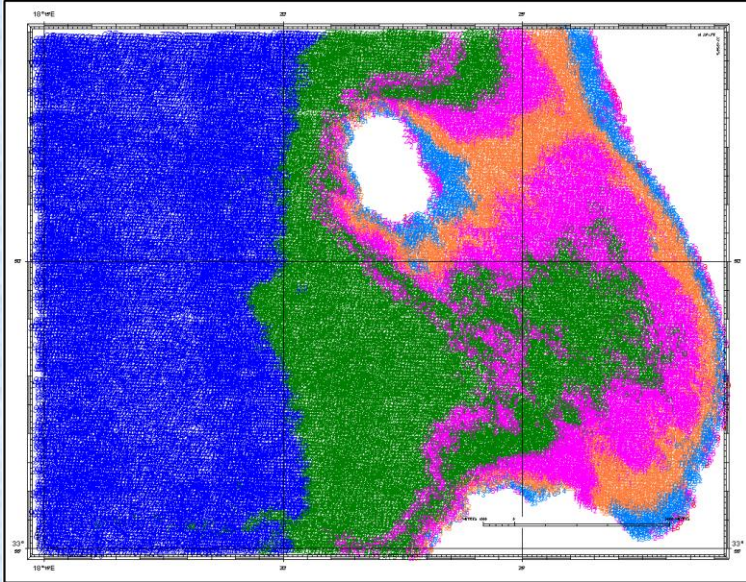


and shall not be constrained by her draft.

<50m >50m

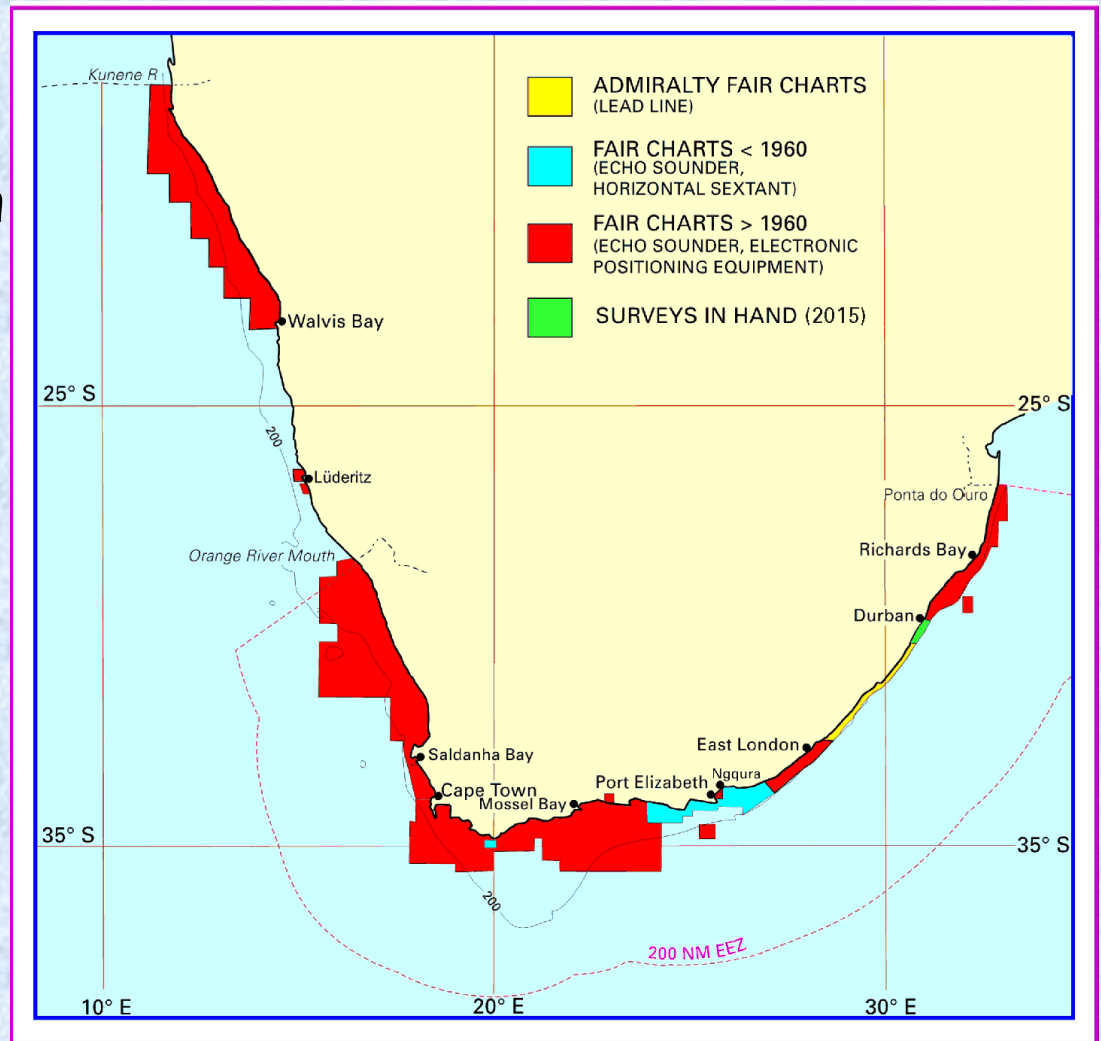
SERVICES

HYDROGRAPHIC SURVEYING OF NATIONAL WATERS



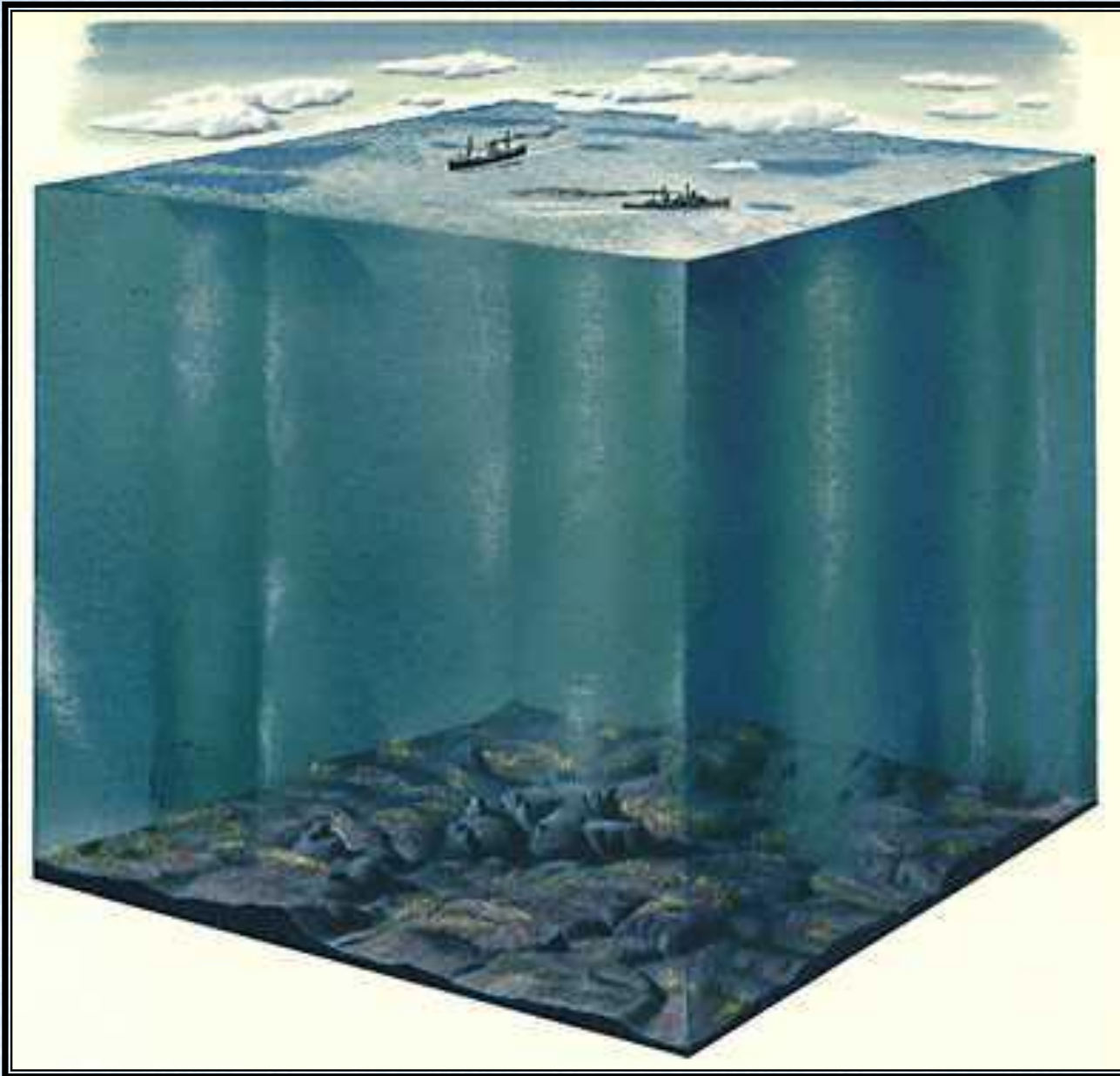
SURVEYING CARRIED OUT

Approaches to Durban
(single beam and multibeam surveys)



SERVICES

MARITIME SAFETY INFORMATION

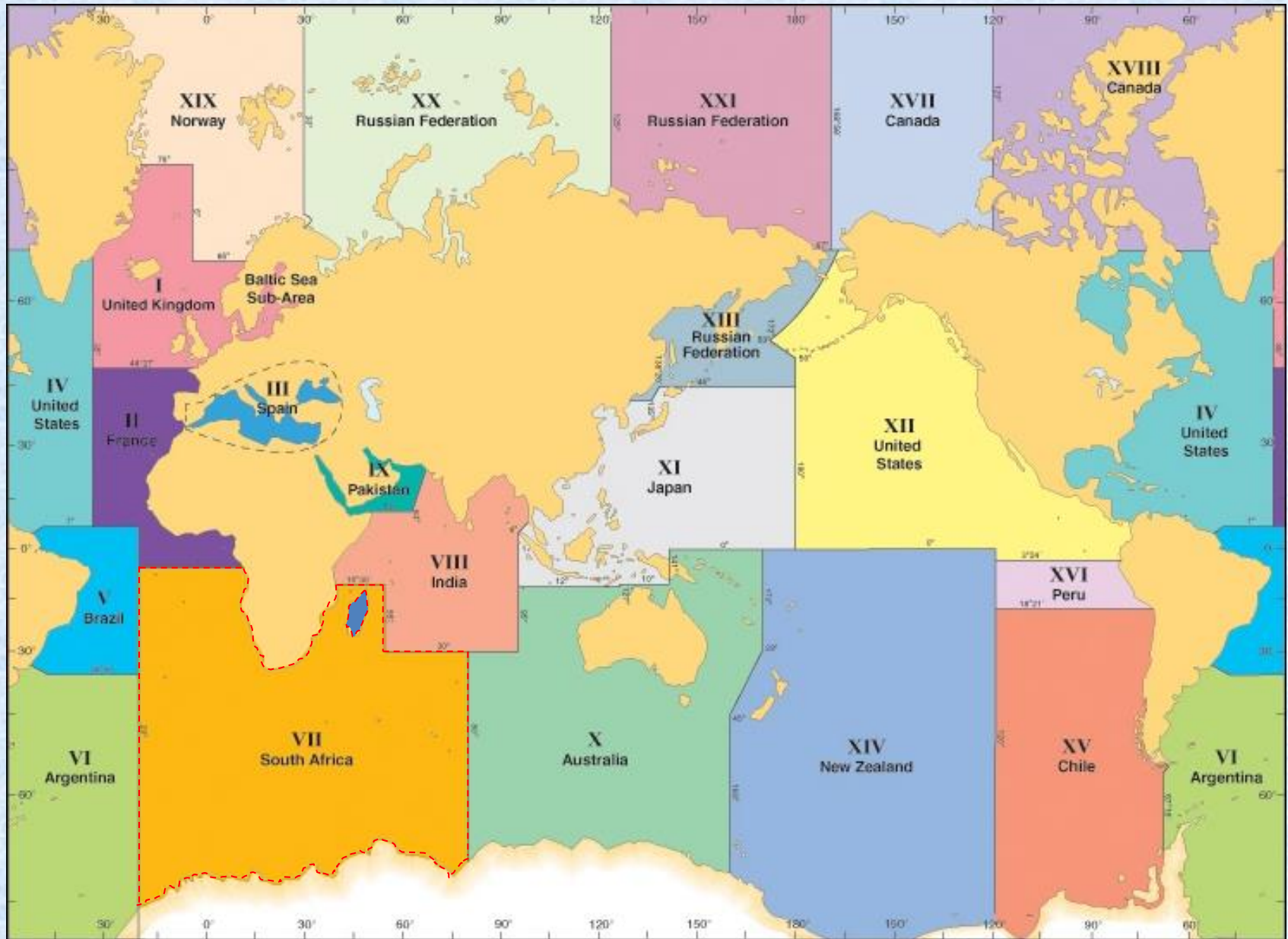


SERVICES
MARITIME SAFETY INFORMATION

WHAT IS MSI?

Navigation and meteorological warnings,
meteorological forecasts and other urgent
safety related messages.

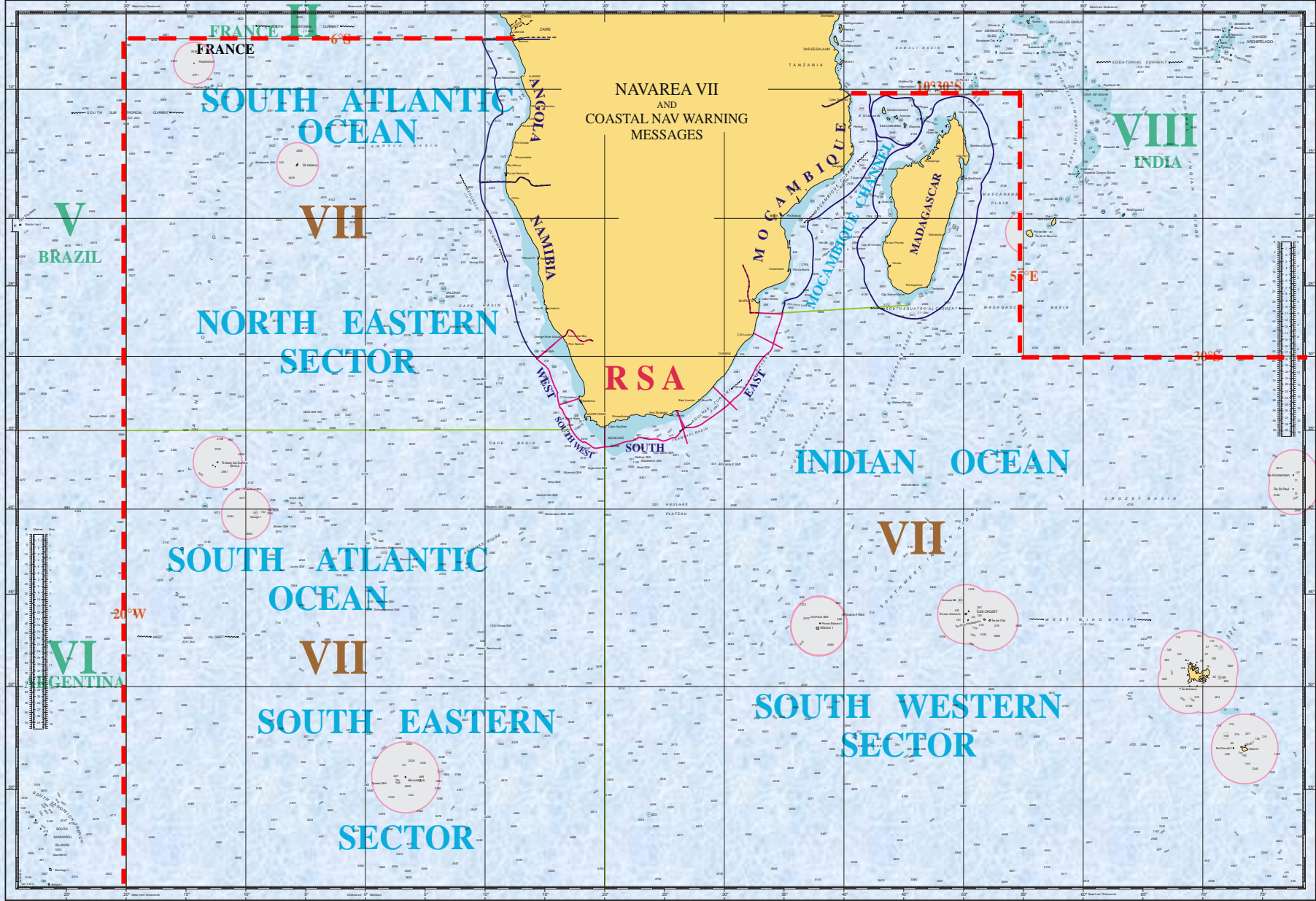
NAVAREAS



NAVAREA VII

I NYS

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Published at Cape Town on 28th Nov 1988 under the Supervision of Captain C.A.J. (Retired) Spillings, R.N.N.

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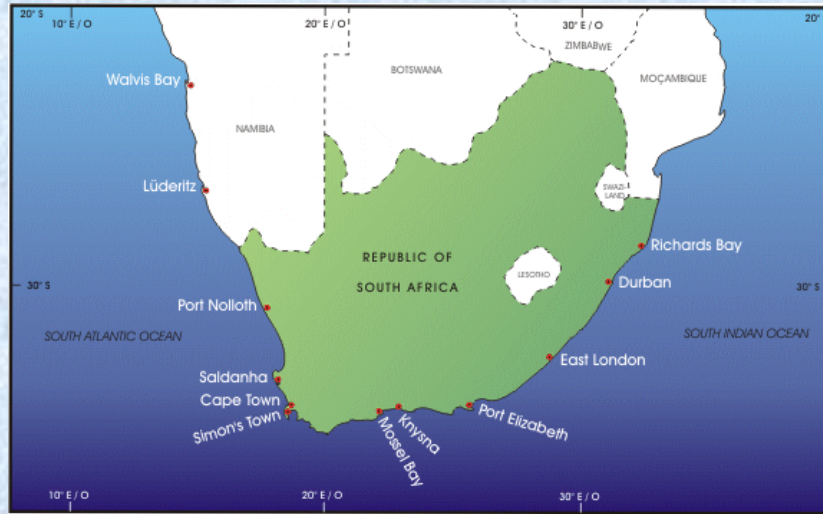
SAN 1

SERVICES

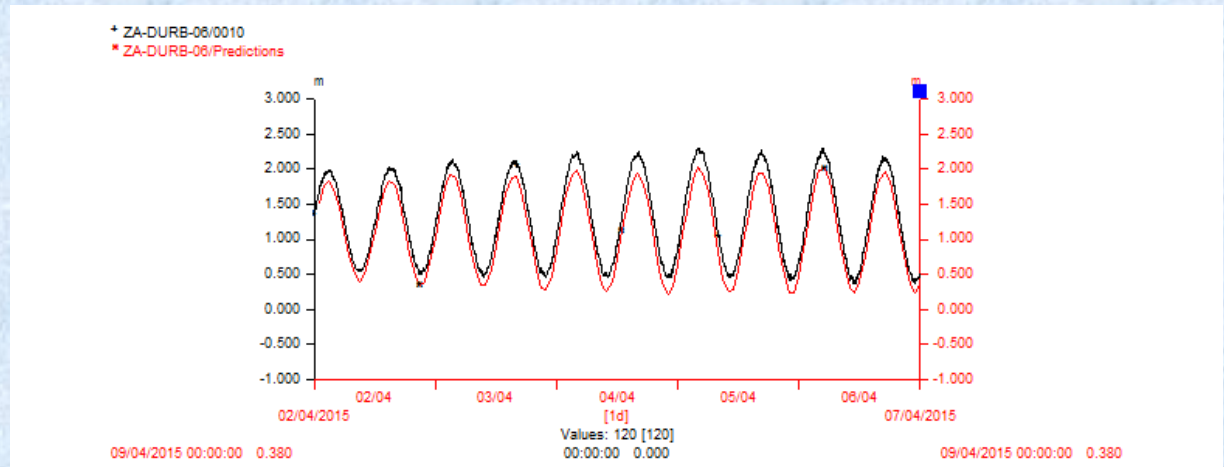
TIDAL INFORMATION



Acoustic Tide Gauge
continuously recording tidal level



RSA Tide Gauge Network



Tidal Analysis
Comparing recorded and predicted tides

SERVICES INTERNET

Maritime Safety Information
High and Low Tidal Information
for two concurrent months.
Digital Notices to Mariners
Links to Chart Agents
Chart Catalogue
Weather Information
(INTRANET only)

NAVAREA VII MESSAGES

2014 Series

- 326 South Atlantic Ocean - NE Sector - Drilling operations - MV Explorer.
- 362 South Atlantic Ocean - NE Sector - Offshore Angola - Accommodation barge in location.
- 363 South Atlantic Ocean - NE Sector - Offshore Angola - Restricted area.
- 364 South Atlantic Ocean - NE Sector - Vessel moored.

Agents for South African Electronic Navigational Charts (ENCs)

Official South African ENC products are available to commercial users through the Value Added Reseller (VAR) for ENCs (IC-ENC) as listed below:


- Admiralty Charts and Publications - <http://www.ukho.gov.uk/>
- ChartCo - <http://www.chartco.com/>
- Chart World - <http://www.chartworld.com/>
- Datema Nautical Safety - http://www.datema.nl/specials/enc_track/
- Jeppesen Marine - <http://www.c-map.no/>
- Maris Maritime Information Ssystems - <http://www.maris.no/>
- Navtor - <http://www.navtor.com/>
- Primar Stavanger - <http://www.primar-stavanger.org/>

South African Electronic Navigational Charts (ENCs)

ENC Product No	ENC Title	Usage Band	Edition	Last Update	To view ENC
ZA1N0010	Northern Waters of Namibia	OVERVIEW	2	5	click here
ZA1N0020	Southern Waters of Namibia	OVERVIEW	1	7	click here
ZA100010	Western Waters of South Africa	OVERVIEW	3	2	click here
ZA100020	Southern Waters of South Africa	OVERVIEW	4	10	click here
ZA100030	Eastern Waters of South Africa	OVERVIEW	3	13	click here
ZA2N0010	Kunene River to Palgrave Point	GENERAL	1	2	click here
ZA2N0020	Huab River to Conception Bay	GENERAL	1	10	click here
ZA2N0030	Meob Bay to Elizabeth Bay	GENERAL	1	4	click here
ZA2N0040	Driemasterpunt to Orange River	GENERAL	1	5	click here
ZA200010	Orange River to Stompneuspunt	GENERAL	1	8	click here
ZA200020	Cape Columbine to Cape Infanta	GENERAL	1	13	click here
ZA200030	Cape Barracouta to Cape Padrone	GENERAL	1	13	click here
ZA200040	Great Fish Point to Cape Hermes	GENERAL	1	7	click here

SERVICES

NOTICES TO MARINERS SERVICE



Notion 28 - 29
January 2015
Supplied Gratis

SOUTH AFRICAN NOTICES TO MARINERS January 2015 EDITION

PUBLISHED MONTHLY
BY THE
HYDROGRAPHIC OFFICE
CAPE TOWN

CONTENTS

- I Explanatory Notes and Index
- II SAN Notices to Mariners. Updates to Standard Navigational Charts
- III SAN Charts and SAN HO Publications - New Charts / Editions
- IV Corrections to SAN HO Publications
- V Corrections to SA List of Lights and Radio Services
- VI Reprints of Radio Navigational Warnings

IMPORTANT

Mariners are requested to inform the Hydrographer, Private Bag XI, Tokai 7966, immediately of the discovery of new dangers, or changes or defects in aids to navigation and of shortcomings in South African charts or publications. Copies of form SAN HO-16, which is a convenient form on which to send in a report, is available on www.sanho.co.za and from any Official Chart Agent or the reproduction at the end of Section VI of the monthly edition of Notices to Mariners.

In addition to postal methods, the following additional communication facilities are available:

Notices to Mariners Web site :	Web : http://www.sanho.co.za
Urgent navigational information : (24 Hour Service)	E-mail : navcomcen.cape@snavy.co.za Fax : +27 21 787 2228
Other navigational information : (0730 - 1600 Mon - Fri)	Fax : +27 21 787 2233 Phone : +27 21 787 2446/2444 E-mail : hydrooan@safra.com
General information : (0730 - 1600 Mon - Fri)	Phone : +27 21 787 2408

Captain A. Kampfer
Hydrographer, SA Navy
NAVAREA VII Co-ordinator



*Monthly Edition
January 2015*

II

28* SOUTH WEST COAST – Saldanha Bay – Buoys.

Source: Hydrographer

SAN 1012 (INT 2672) [Previous Update – NE]

1. Insert: <i>Fl.G.3s</i> on buoy 3 in approximate position	33° 00.25' S	17° 59.38' E
2. Insert: <i>Fl.R.3s</i> on buoy 4 in approximate position	33° 00.22' S	17° 59.31' E
3. Amend: <i>Q</i> on buoy 5S in approximate position to read: <i>VQ</i>	33° 01.26' S	17° 57.50' E

SAN 1011 (INT 2673) [Previous Update – 66/14]

4. Amend: <i>Q</i> on buoy 5S in approximate position to read: <i>VQ</i>	33° 01.26' S	17° 57.50' E
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SAN SC 2 [Previous Update – 60/14] CLARKE 1880

5. Amend: <i>Q</i> on buoy 5S in approximate position to read: <i>VQ</i>	33° 01.25' S	17° 57.54' E
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(SAN 1011, 1012, SC2)

Maintain all products up to date for Notices to Mariners issued.
Assist Fleet with their Chart Folios.

SERVICES CAPACITY BUILDING

Train Local and Foreign Hydrographic
Personnel in the fields of :

Surveying
Chart Production
ENC Production
Tides

