

## Report by South African Weather Service on GMDSS Services in METAREA VII

### Background

South Africa is the responsible issuing service for METAREA VII (see attached map). In addition to providing the High Seas Forecasts in this area, SAWS provides Coastal Bulletins for **Namibian** and **Mozambican** waters. **Météo France**, through its regional office on La Réunion, provides all the marine forecasts in the eastern portion of the region and also provides the tropical cyclone forecast products for METAREA VII throughout the season.

All forecasts are collated in Pretoria and then sent to Telkom Maritime in Cape Town and other coastal radio stations. All marine forecasts are also posted on the SAWS webpage and also made available through a fax-on-demand system. Six-hourly sea level pressure analyses are also made available through these channels. The High Seas predictions are sent on to LES Burum (Station 12), which places them on the **AOR-E and IOR satellites** for daily broadcasts at 09h20 and 19h20 UTC. The Telkom Maritime also transmits the High Seas bulletin on HF radio (telephony). Coastal bulletins are sent through NAVTEX, HF and VHF.

**Monitoring.** The SAWS has its own Inmarsat-C terminal, and is thus able to monitor all EGC products broadcast from the IOR and AOR-E satellites. Unfortunately, Pretoria is too far from the coast to monitor the NAVTEX forecasts, however, the coastal radio stations do monitor these transmissions locally.

The South African Navy continues to provide invaluable support by making their HF transmitters available for **SAWS radiofax broadcasts** (see attached schedule). Bearing in mind that there are (a) still no affordable means of broadcasting weather graphical products to vessels at sea (b) the overwhelming testimony of mariners to the usefulness of these products and (c) the fact that most vessels have a radiofax receiver on board, the SAWS hopes to persuade the SAN to keep this service intact until a viable replacement becomes available.

### Present Limitations

The METAREA VII is one of the largest areas of marine responsibilities allocated to a National Meteorological Service. On the other hand, SAWS is a relatively small NMS and the marine division presently consists of four forecasters.

Despite this, the extent of METAREA VII is such that it is impossible to routinely provide services south of the 40<sup>th</sup> parallel. Vessels sailing in this region have to request forecasts for the areas they are transiting. Where propagation conditions have been poor, some vessels have provided SAWS with access to their Inmarsat e-mail accounts and the forecast charts have then been sent direct for onboard interpretation.

Based on the developmental pillars, the challenges of the country, the SADC region and the continent faced with energetic but under-developed human resource capacity at the SAWS disposal, it is therefore necessary that SAWS employ more marine staff so that it can expand its services, thus strengthening the expertise and honing the skills of the personnel in this field (marine).

### Progress

With operational marine forecasters increased from two to four personnel, SAWS can now effectively manage two marine shifts daily. This resulted in a forecast period increased from 12 hours to 24hours. The midnight (00h00 UTC) sea level chart is now analysed by marine

forecasters as opposed to before, when it was still analysed by a night-shift general forecaster for the country (SA).

Recognising the emphasis that mariners place on **sea state prediction**, SAWS has especially focused on this parameter, making use of both the UKMO and NOAA wave forecast models. An agreement with CSIR and the National Port Authority has resulted in SAWS having access to the coast (wide wave buoy network operated by the former). As a consequence of its providing monthly *in-situ* wave data to the NWS, the SAWS received 5-day hourly predictions from the WAVEWATCH III model, for the Agulhas Bank. This is one of the areas in METAREA VII where much damage has been inflicted on shipping over the years. The SAWS also provides warnings of possible **abnormal wave events** in its coastal bulletins. Several vessels have suffered serious structural damage and in some cases even foundered in the Agulhas current off the eastern coast, as a result of the severe current/wave interaction there.

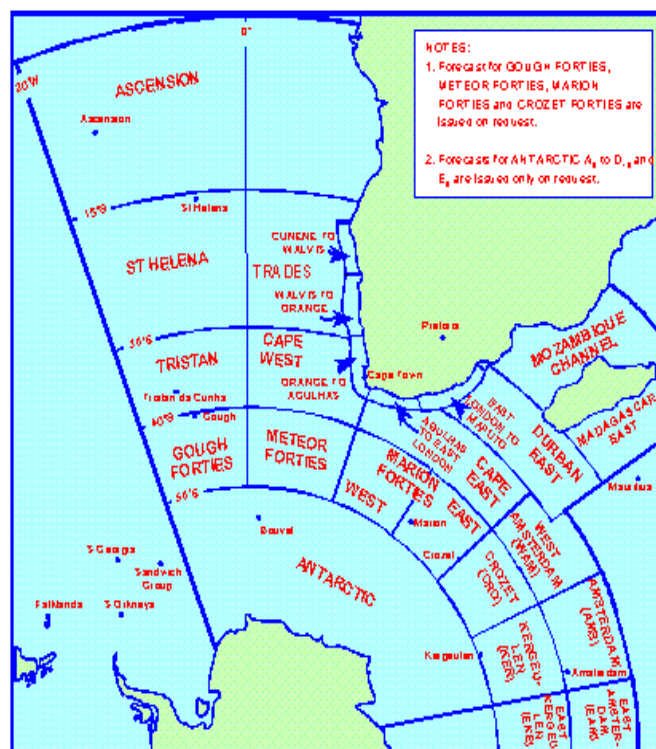
Updated and Reviewed by Tshepo Ngobeni

12/01/2007

**SafetyNet - METAREA VII - SOUTH AFRICA**  
Maritime Forecast Areas

*Transmission via Burum CES to IOR and AOR-E Satellites  
Scheduled Broadcast Times 0940 and 1940 UTC*

*Thick line indicates limits of METAREA VII*



## WEATHER FACSIMILE BROADCAST SCHEDULE for METAREA VII

South African Weather Service / Cape Naval Radio - AFMET ZSJ

DRUM SPEED: 120 IOC: 576

TIME UTC	DESCRIPTION	MAP ID
04:30	FACSIMILE PROGRAMME FOR ZSJ	
05:00	00:00 SURFACE ANALYSIS (SHIPPING)	ASXX
06:30	12:00 UPPER-AIR PROGNOSSES (12Z)	FUXX
07:30	12:00 SURFACE PROGNOSSES (12Z)	FSXX
08:00	ANTARCTIC ICE LIMITS (OCT. - MARCH)	AIAA
10:30	06:00 SURFACE ANALYSIS (SHIPPING)	ASXX
11:00	00:00 SURFACE PROGNOSSES	FSXX
15:30	12:00 SURFACE ANALYSIS (SHIPPING)	ASXX
22:30	18:00 SURFACE ANALYSIS (SHIPPING)	ASXX

FREQ KHZ	TIME UTC
4 014	16:00 - 06:00 (When TX available)
7 508	H24
13 538	H24
18 238	06:00 - 16:00 (When TX available)

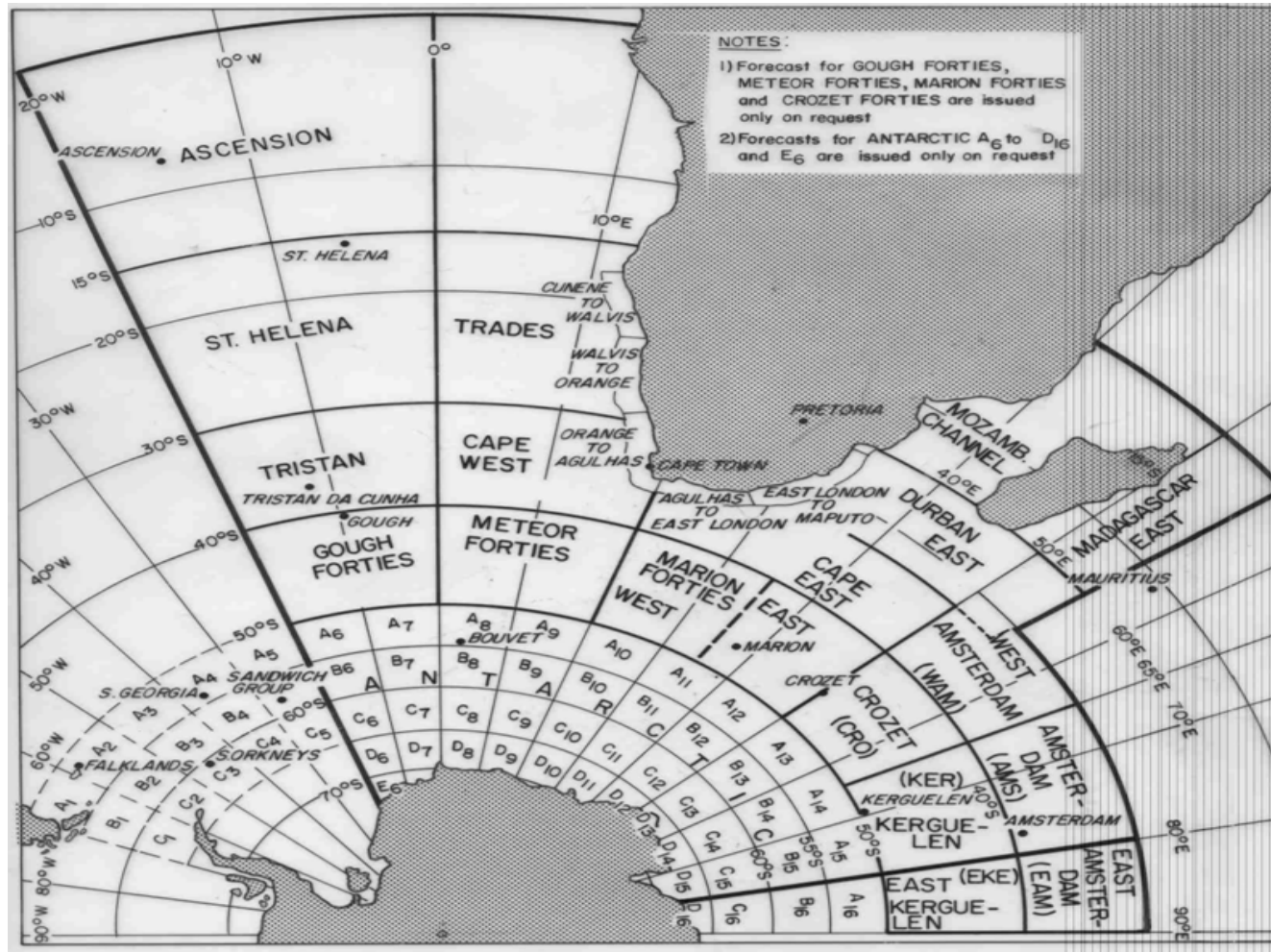
The facsimile broadcast will be interrupted twice daily at 09:15 and 17:00 UTC to transmit RTTY (radio telex) weather bulletins for Coastal Waters and High Seas.

Parameters: shift 170 khz centre frequency 1700hz 75 baud

All prognostic products are output from the South African Weather Service's global spectral model (GSM). The surface analyses are produced by the Central Forecasting Office in Pretoria.

# WEATHER FORECAST AREAS FOR SHIPPING

## SOUTH AFRICAN WEATHER SERVICES



## NAVIGATION WARNING – URGENT

**From :** Shipping Forecaster  
SA Weather Service                      Tel. 012 367 6041  
Private Bag X097                          Fax. 012 367 6042  
Pretoria 0001

**To :** Duty Officer, Hydrographic Office  
Fax. 021 787 2228

**Subject :** Warning of Expected Abnormal Wave Conditions.

Issued: Tuesday 29<sup>th</sup> August 2006 – 08h00 UTC

- Abnormally high waves are possible in the Agulhas Current off-shore Algoa Bay to East London, spreading to Richards Bay by Wednesday morning reaching Maputo by evening. It will moderate from the south by Thursday afternoon.

**Warning valid:** 10h00 UTC Tuesday 29<sup>th</sup> August 2006 until 12h00 UTC Thursday 31<sup>st</sup> August 2006

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