

# REPUBLIC OF SOUTH AFRICA



## SAN HYDROGRAPHIC OFFICE

**NATIONAL REPORT**

**TO THE**

**IHO HYDROGRAPHIC COMMISSION ON ANTARCTICA (HCA)  
17<sup>TH</sup> CONFERENCE, VTC  
14 June 2021**

## Hydrographic Office / Service

1. The SA Hydrographic Service is a government-funded service and is part of the SA Navy. The major assets for the Hydrographic Service are as follows:

- a. One Hecla Class Hydrographic Survey Vessel namely **SAS PROTEA**. She carries on board two smaller survey launches that are deployed for shallow water surveys.
- b. The Hydrographic Office, with the following principle functions: conduct hydrographic surveys, produce paper nautical charts, electronic navigational charts (ENCs) and publications including List of Lights and Radio Services, three volumes of Sailing Directions, maintain a tide gauge network and provide tidal information, collect GEBCO data, issue monthly Notices to Mariners, Radio Navigational Warnings and a Chart Depot service.

## Surveys

2. New Surveys. The SA Navy did not conduct any Antarctic surveys in the reporting period.
3. New Technologies And /Or Equipment, New Ships. There is currently a project underway for the replacement of the SAS PROTEA as well as the survey launches. The new vessel will also be ice strengthened. When the new hydrographic survey vessel is delivered to the SA Navy, she will be able to assist in scientific and hydrographic missions to Antarctica and the Islands as she will also be strengthened for summer ice conditions. She will also be a platform to be used by other government departments should the need arise.
4. Problems Encountered. Nothing reported.

## New Charts & Updates

5. ENCs. No new ENCs were produced in the reporting period. The South African geographical area of interest in Antarctica is concentrated in Dronning Maud Land and the South African Hydrographic Office has published ZA300300, based on SAN 2004, covering the region between 69° 10' 00"S to 71° 41' 00"S and 05° 30' 00"W to 00° 10' 00"W at a scale of 1:300 000 (Figure 1).

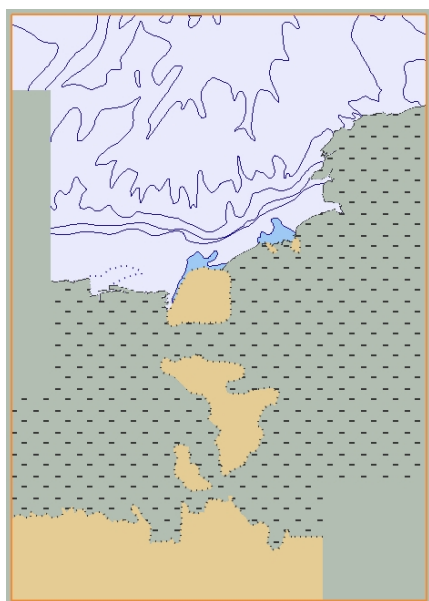


Figure 1. ZA300300



Figure 2. Paper Chart SAN 2004-INT 9056

6. ENC Distribution Method, RNCs. ENC's are distributed to IC-ENC for validation, where after it is made available to registered value added resellers from which it is available to the mariner to order/purchase.

7. INT Charts/National Paper Charts. No new INT or national charts were produced in the reporting period. South Africa is the coordinator for international charting within Region H but also the producer nation of a single paper chart and an ENC within charting Region M, which is based on the WGS 84 ellipsoid. The South African geographical area of interest in Antarctica is concentrated in Dronning Maud Land and the South African Hydrographic Office has published paper chart SAN 2004 (INT 9056) – Approaches to Dronning Maud Land (Figure 2), covering the region between 69° 10' 00"S to 71° 41' 00"S and 05° 30' 00"W to 00° 10' 00"W at a scale of 1:300 000. The standard land area (buff) has been substituted with a greyscale RADARSAT image supplied by the South African Satellite Application Centre (SAC). The main purpose of the chart is to cover the approaches to the area negotiated by scientific research vessels to land scientists and equipment for deployment at the South African Research Station SANAE IV. The bathymetric data within the area of the approaches to Dronning Maud Land is based on satellite derived altimetry and bathymetric contours from the Alfred-Wegener Institute, Germany and trackline bathymetric cruise data from the US National Geophysical Data Centre, Boulder, Colorado, USA (GEODAS) and the South African Department of Forestry, Fisheries and the Environment (DFFE): Antarctica and Islands, Cape Town.

8. Other charts, e.g. for pleasure craft. Nothing reported.

9. Problems encountered. Nothing reported.

#### **New Publications & Updates.**

10. New Publications. No new publications were produced in the reporting period. South Africa has since 2001 published, in its South African Sailing Directions Vol III (SAN HO-23) Chapter 10, information on the Antarctic Region. The scope of this chapter encompasses that part of NAVAREA VII south of the 60° parallel and the Antarctic Coast between 20°W and 80°E. It consists of seven sections that provide essential information on the regulations/Antarctic Treaty, aircraft operations, general scientific and environmental information, natural conditions, sea ice, navigation in ice and a section on Bouvet Island (Bouvetøya).

11. Updated Publications. No publications were updated in the reporting period.

12. Means of Delivery, eg. Paper, Digital. The relevant publications are distributed by means of paper products via registered value added resellers from which it is available to the mariner to order/purchase.

13. Problems Encountered. Nothing reported.

#### **Maritime Safety Information (MSI).**

14. Existing Infrastructure for Transmission. The Co-ordinator of NAVAREA VII (South Africa) in association with the South African Meteorological Service currently transmits all the necessary NAVAREA VII and METAREA VII (SafetyNET) Weather Information and Shipping Safety messages via the SafetyNET IOR and AOR-E satellites as far south as the Antarctic. These messages are backed up by HF transmissions from Cape Town Radio. No NAVAREA VII messages were transmitted via SafetyNET during the reporting period for the Antarctic Region thus far. South Africa has commenced trials with the Iridium SafetyCAST service as of 26 April 2021, with SANHO broadcasting test messages, and Cape Town Radio broadcasting all navigation warnings via SafetyCAST.

15. New Infrastructure In Accordance With GMDSS Master Plan. Nil.

16. Problems Encountered. Currently, the SANHO does not include any radio or other aids to navigation at SANAE base in its SAN HO-1 List of Lights and Radio Signals publication. Talks between the Hydrographer and the DFFE highlighted the need for closer cooperation to streamline information and data sharing regarding aids to navigation as well as search and rescue plans for the Antarctic region.

## S-55

17. Latest Update (Tables). Nothing reported.

## Capacity Building

18. Offer of And/Or Demand For Capacity Building. South Africa welcomes any additional survey data including satellite imagery (geo-referenced) within their charting area from neighboring countries to update chart SAN 2004 (INT 9056) and ENC ZA300300.

19. Training Received, Needed, Offered. The Terms of Reference between the SANHO and the DFFE makes provision for capacity building initiatives for the benefit of staff and personnel between the SANHO and DFFE, although no such initiatives took place during the reporting period.

20. Status of National, Bilateral, Multilateral Or Regional Development Projects With Hydrographic Component. SA's polar issues are mainly administered through Department of International Relations & Cooperation (DIRCO), Department of Forestry, Fisheries and the Environment (DFFE) and Department of Science & Technology (DST). DST manages the relations with academic institutions or research grants. To date, DFFE in cooperation with DIRCO and DST is leading the development of an overarching Integrated Antarctic and Southern Ocean Strategy. The SANHO and the DFFE recognizes the need to actively develop and maintain a working relationship for the mutual benefit of both organisations for the furtherance of maritime safety in the Antarctic and South African Islands, in the spirit of cooperative governance. This relationship has been further strengthened during talks between the two departments in 2018 with Terms of Reference drafted.

21. Definition of bids to IHOCBC. Nothing reported.

## Oceanographic Activities

22. General. A replacement supply vessel, SA AGULHAS II, commissioned in South Africa in July 2012, is used by the DFFE Directorate: Antarctica and Islands to transport equipment and supplies to the researchers at SANAE IV and conducts research in the waters surrounding Antarctica. The servicing of the SANAE base on the Antarctic mainland and the two weather stations on Marion and Gough Islands is carried out once per year. During these voyages, meteorologists accompany the vessel to collect data and deploy ocean drifting weather buoys.

23. GEBCO/IBCSO's activities.

- a. GEBCO Seabed 2030. South Africa supports the Seabed 2020 initiative, and has been appointed as the Crowdsourced Bathymetry Coordinator for the Southern Africa and Islands Hydrographic Commission (SAIHC) during SAIHC 17 in February 2021. To that effect, South Africa actively encourages and invites the collection of, and sharing of bathymetric data within its area of responsibility, including the Antarctic.
- b. IBCSO. South Africa submitted bathymetric data to the IBCSO in support of the compilation of Version 2 of the Chart. Soundings from ENC ZA300300 were exported and submitted to the IBCSO, along with its associated metadata.

24. Tide Gauge Network. The SANHO does not have/maintain a tide gauge network in the Antarctic.
25. New Equipment. Nothing reported, although the new survey vessel for the SA Navy will make provision/include oceanographic equipment.
26. Problems Encountered. Nothing reported.

#### **Other Activities**

27. Participation in IHO Working Groups. South Africa actively participates in the HCA and is represented by the SA Navy Hydrographer.
28. Meteorological Data Collection. Nothing reported.
29. Geospatial Studies. Nothing reported.
30. Disaster Prevention. South Africa is a signatory to the Antarctic Treat Consultative Meeting (ATCM), and as such, provides input regarding vessel traffic in the Antarctic region. The SA Agulhas II is viewed by the Hydrographer a source of AIS data while deployed in the Antarctic, and requested whether the DFFE would be willing to share any AIS data for submission to the ATCM. The DFFE also indicated there is currently a draft search and rescue/emergency plan between them and the South African Maritime Safety Authority (SAMSA), represented here by the Maritime rescue Coordination Centre (MRCC).
31. Environmental Protection. Nothing reported.
32. Astronomical Observations. Nothing reported.
33. Magnetic/Gravity Surveys. Nothing reported.
34. MSDI Progress. Nothing reported.

#### **Conclusions**

35. Particular Issues that may require HCA Consideration.
  - a. Invited to take note of the report and the information provided.
  - b. Invited to take any appropriate action deemed necessary.