

Southern African Data Centre
for Oceanography
P O Box 320, Stellenbosch 7599
South Africa

Manager: **Marten Gründlingh**

Email: mgrundli@csir.co.za

Website: <http://sadco.csir.co.za/>

SADCO is sponsored by ...

- Department of Environmental Affairs
- SA Navy
- CSIR
- SAEON
- Namibian Ministry of Fisheries & Marine Resources



First non-paper version of the Newsletter

This is the first non-paper SADCO newsletter. With the growth in web-page industry, and speed and mode of access (bandwidth), only a few newsletters are still being printed and distributed. The paper and money saved by making use of IT is also a significant advantage.

Where did the SADCO Newsletters start?

SADCO 1977-1989

The very first newsletter appeared as part of SADCO II (1977-1989), and specifically in August 1985 (Fig. 1). The editor was Dr Siv Borgin, a member of the SADCO team, and the newsletter introduced SADCO, its functions, data holdings, software developments and staff. At the time, the SADCO staff comprised 7 people, four of which were competent programmers. There was also a person dealing with information and requests, an operator and a secretary. By comparison, SADCO's present staff complement has shrunk to about 11% of that of SADCO II.

Historic records suggest that only 7 Newsletters were produced (1985-1987), before the CSIR's major reorganisation (1987-1988) started impacting on SADCO's staff, the production of the Newsletter and, ultimately, also on SADCO itself.

SADCO 1990 – present

The first Newsletter of SADCO III appeared in October 1990 (Fig. 2), and the layout was handled by Monique Knoetze, CSIR's Publications Officer in Stellenbosch. Now it sported double-sided printing, double-column layout, and a greater selection of fonts, but still

lacked a logo.

A new logo (still in use) appeared for the first time in the Newsletter of February 1991. In 1995 (Fig 3) the layout was modified once again.

A significant make-over was undertaken in 1998, when Monique designed a new, stylish layout (Fig. 4). Monique and her colleague, Carina Strydom, also handled the layout and printing, as well as presentations (at that time we were still in the "overhead transparency" age), posters, visitors, and any SADCO meetings. They added a fresh breeze to the otherwise unexciting life within the data management domain (and all the other groups they supported in Stellenbosch). Their group was called "Beyond Blue" and they had their offices painted purple.

Magdel van der Merwe took over from Monique and Carina and designed the next (and so far the last) make-over of the SADCO Newsletter in 2002 (see the front page of the present Newsletter). Magdel still handles the design, layout, and print-ready finalisation of the Newsletter and the SADCO Annual Report.

Just like 25 years ago, the aim of the Newsletters remains to communicate with SADCO users and interested parties. Data loading and system development forms a significant component of the communication. After 2006 the Newsletters also introduced similar aspects of AfrOBIS. The newsletters have consistently portrayed a conservative appearance, befitting the role of the data centre.

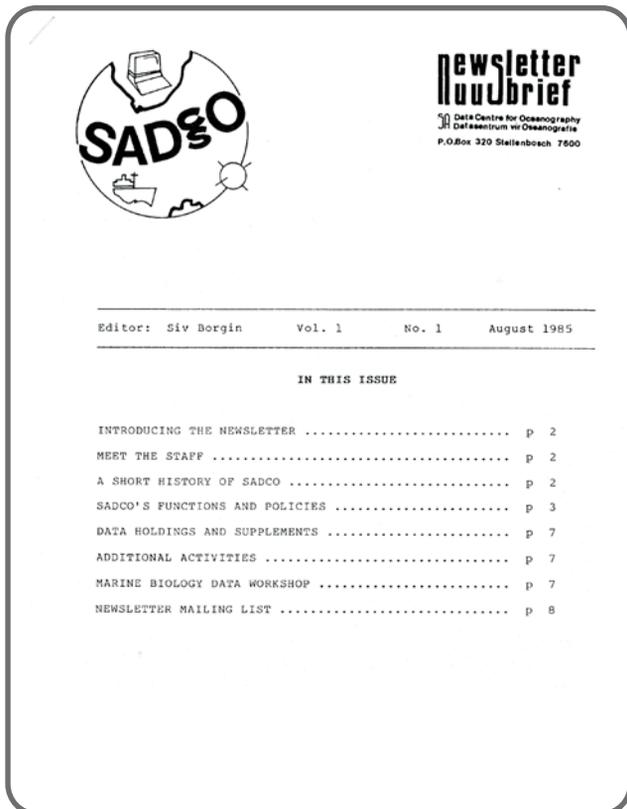
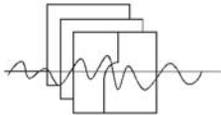


Fig. 1 The first SADC newsletter, August 1985

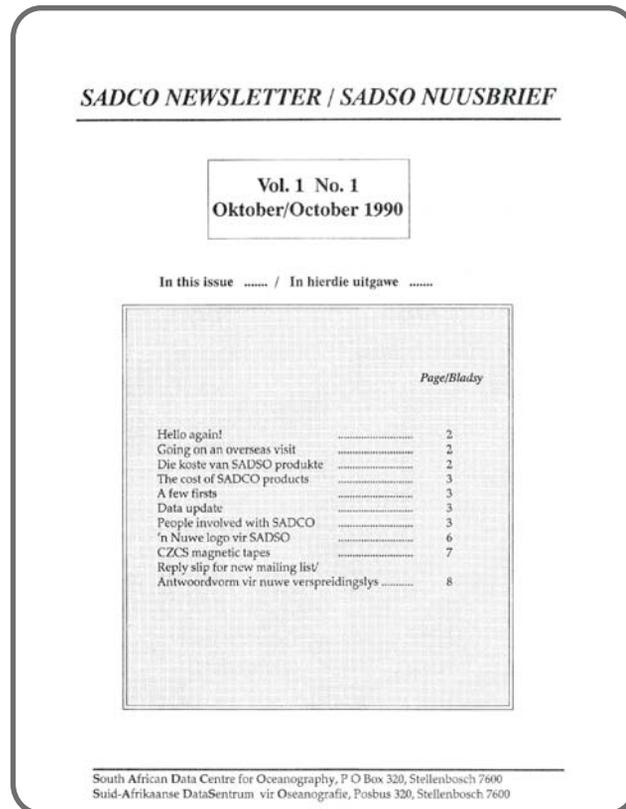


Fig. 2 First newsletter of SADC II, Oct 1990

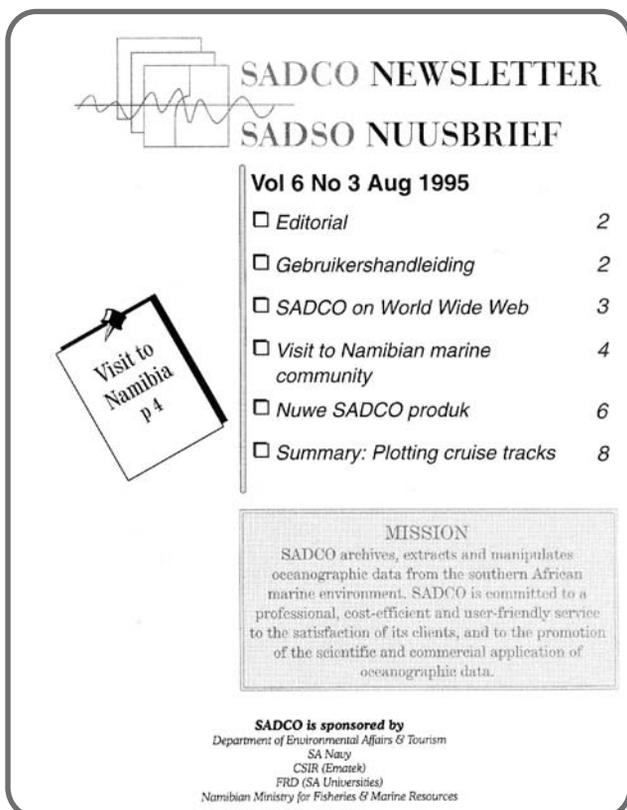
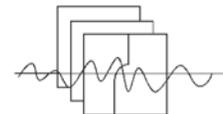


Fig. 3 Newsletter appearance of August 1995



Fig. 4 Newsletter of February 1998



Registration for on-line data extraction

SADCO users who prefer to do on-line extractions need to register. This is a simple process, as indicated in the Newsletter of June 2010 (registration will also help us to keep you informed of future editions of the Newsletter). On-line extraction, and the ability to draw the data into ODV directly for colourful and versatile plots and graphs, has made a large difference to SADCO's usefulness.

To date, 62 users have registered (RSA 50; USA 6; Australia 2; Namibia 1; Mauritius 1; France 1; Netherlands 1).

This is very encouraging. Extraction times have varied according to the amount of data extracted, from 1 second (only 47 records) to 1 min 16 seconds (38 000 records).

SADCO's present search mode is similar to that of the World Ocean Database (WOD) - see (<http://www.nodc.noaa.gov/OC5/SELECT/dbsearch/dbsearch.html>)

However, while SADCO searches on a single parameter at a time (vessel, or date, or project, etc), WOD's search allows any combination of parameters. This makes a search faster, and it may be something for SADCO to consider for future developments.

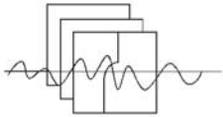
User's Guide now on the web

A User's Guide is now available on the SADCO web site, capturing the various modes of searching for data, extracting and plotting the data. It is recommended that first-time users have a quick glance at the examples given.

The User's Guide also provides a brief insight into the plotting of the data via ODV (*Ocean Data View*). However, ODV is quite an extensive and versatile system, and can do MUCH more than the items illustrated in the User's Guide. Interested users are strongly urged to obtain the ODV 4 package from: <http://odv.awi.de>

The topics covered in the SADCO User's Guide are:

- ▶ Registering as a user
- ▶ Locating data sets
- ▶ Search for data from an institute
 - data by scientist name
 - data from a vessel (platform)
 - time series data
 - data from a project
 - VOS data
- ▶ Queuing of requests
- ▶ Downloading the extracted data
- ▶ Plotting the data



Consistency of metadata in SADC

When it was decided to provide universal access to SADC's data, a new interface was created to facilitate the access (even to non-oceanographers). The appropriate software has been established and installed, and we are satisfied that this part of the project has been successful. Changes were made in the way the data is stored to ensure that the data could be extracted in manageable "chunks".

It was foreseen at the time that the **metadata** needed to be checked to ensure ease, clarity and (especially) **consistency** for all users. Over many years (decades) inconsistencies had quietly crept into SADC's metadata. A few examples will illustrate this:

- **Name of the Chief scientist:** The same person's name was sometimes entered with a title and sometimes without a title; sometimes with two initials and sometimes with one; sometimes the surname would be spelled differently. To be consistent, all titles were removed and only one initial was retained.
- **Project names.** When the project name became a searchable entity, an effort needed to be made to ensure that the project names were spelled consistently (in terms of capital letters, hyphenation, etc), and that cruises on the same project carried the same project name. Many O&C cruises loaded before 1990 were simply given one, universal project name, namely "SFI". Many other surveys have no project names. In the process a number of unnamed cruises were "discovered" that actually formed part of the "JARE" (Japanese Antarctic Research Experiment) project.
- Ensuring the right **Organisation name.** Organisations are continuously changing their names. E.g., in the CSIR the oceanography section fell under NPRL, NRIO, EMATEK, Environmentek, and lately under National Resources and the Environment and Built Environment (all these have

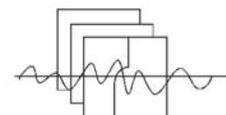
been changed to "CSIR"). For Oceans and Coasts the list of predecessors is even longer. If the database is searched under "organisation name" the uninformed user cannot be expected to know about all these changes. These corrections are still underway.

- **Vessel names.** Some vessels have initials, like the T B Davie. But T Davie, Thomas B Davie, or Davie, Thomas have all been used. These names are now all consistent in spelling.
- **"Missing" cruises.** It appears that the number of cruises executed by the Sea Fisheries Research Institute for several years around 1970 were not submitted to SADC. The issue is still being investigated, but the possibility exists that the change from analogue to electronic capture of data may have impacted on the data flow.

To date about 3 200 such corrections have been made to the survey metadata, and the process is still continuing.

It is most likely that the data provider entered the metadata as it was considered correct at the time. However, a subsequent data processor used a different spelling, and the data centre did not pick up on these modifications when the data was submitted. Presently, the vessel and PI are selected from a drop-down menu during the loading process, eliminating the possibility of spelling errors.

Louise Watt is the person who is making all the corrections on the database. Thanks, Louise, for systematically and conscientiously attending to this laborious task!



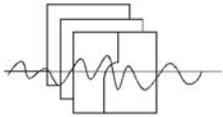
Steering Committee, November 2010 (Fig. 5)



Front, LTR: Dr Alan Meyer (CSIR), Ms Sanette Gildenhuys (IMT), Ms Anja van der Plas (NATMIRC), Ms Marielle Ford (SAEON, secretary), Prof. Charles Griffiths (UCT).

Back: Dr Raymond Roman (UCT), Mr Jimmy Khanyile (DEA), Mr Mthuzeli Gulekana (DEA), Capt. Abri Kampfer (SAN), Mr Roy van Ballegooyen (CSIR, Chairperson), Prof Geoff Brundrit (DEA), Dr Wayne Goschen (SAEON), Ms Ursula von St Ange (CSIR), Mr Carl Wainman (IMT), Dr Marten Gründlingh (CSIR)

Absent: Mr J Stander (SAWS), Mr Manuel da Silva (Angola), Prof Johann Lutjeharms (UCT), Dr Mika Odido (ODINAFRICA), Dr Juliet Hermes (SAEON), Ms L Mkatshwa (SAWS), Dr Charlotte McBride (SAWS), Prof Terence Dube (SAWS), Mr Sidney Bilski (Metocean Services), Mr Chris Bartholomae (NATMIRC)



Data loaded from O&C (Oceans and Coast)

For almost a century, the present-day Oceans and Coast Branch of the South African Department of Environmental Affairs and its manifold predecessors, have been the main oceanographic data-collecting organisations in South Africa. This started with the first cruises by John D Gilchrist on the *SS Pickle* in 1920.

The exploration and survey of the sea by O&C seems to be continuing almost unabated.

Over the past year SADCO has obtained and loaded the following O&C data:

- **CTD data** from the *Africana* (31 cruises), *Ellen Khuzwayo* (12 cruises) and *Algoa* (1 cruise). The cruises were executed between 2005 and 2010. The latest data submitted to SADCO consisted of 4 cruises of the *Africana* (the last one in December 2010), but this has not been loaded yet.

- **Thermistor string** data collected at Tsitsikamma and St Francis, 2008-2009.
- **UTR data**, 6 sets off the South Coast, 2008-2009.
- **Moored ADCP** data, collected off Tsitsikamma, 2008-2009.

Because of the recent nature of this data, all data sets have been flagged. DEA/O&C needs to be congratulated with the speed with which the standard data is processed. Data from some of the cruises is submitted to SADCO within months (weeks) of collection. At the same time, the data still awaits verification as well as analysis of the nutrient data.

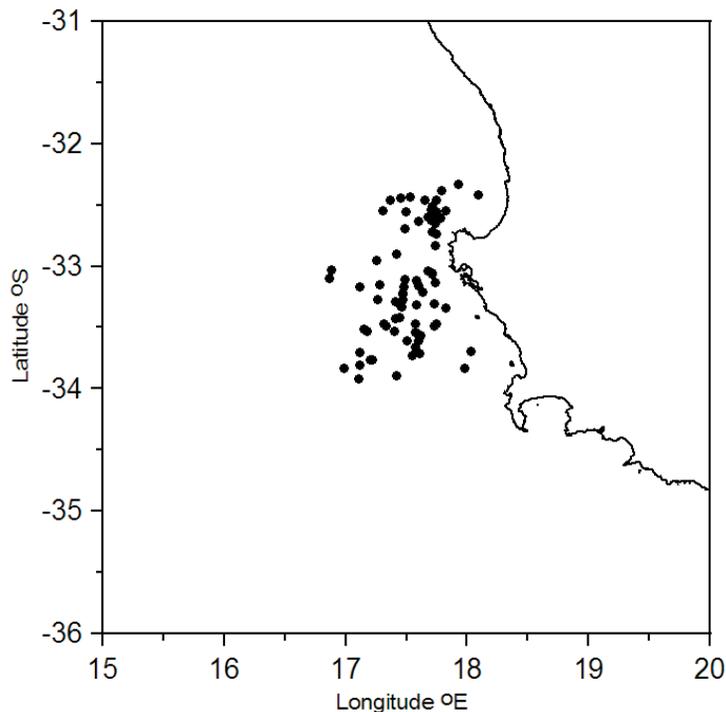


Fig. 6. Cruise track of the *Pickle*, 1920

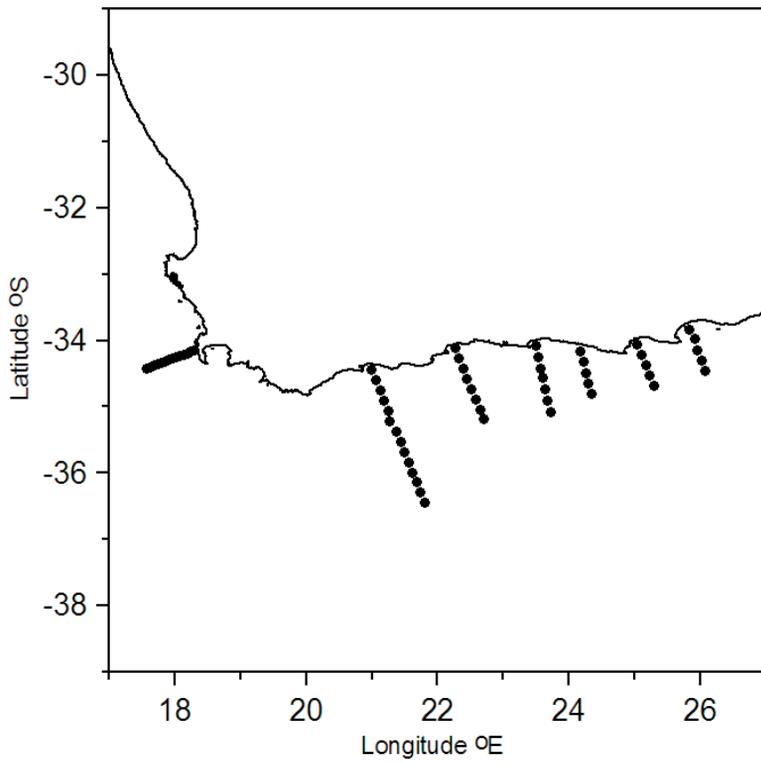
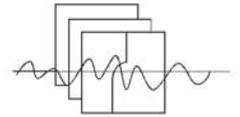


Fig. 7. Cruise track of the Algoa,
January 2006

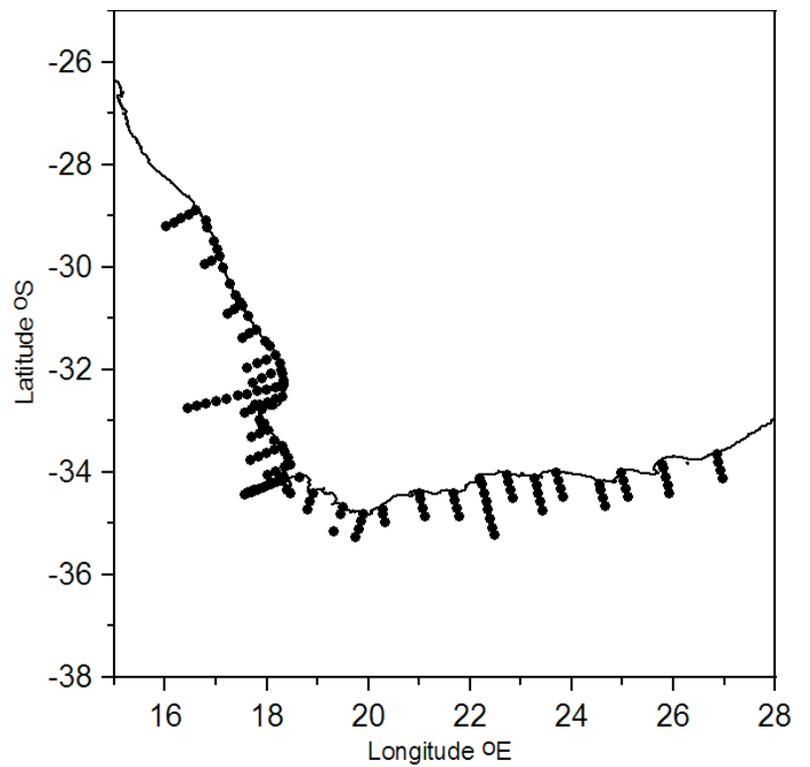
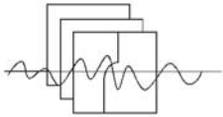


Fig. 8 Cruise track of the Africana,
May/June 2010



ASCLME East Coast Data

It has been agreed by the Management of ASCLME (Agulhas Somali Current Large Marine Ecosystem) that data collected during the ASCLME can also be submitted to SADCO, where it will **remain flagged**.

This additional safety net for data is quite useful, and SADCO is pleased to be able to support ASCLME in that way.

CTD data from two cruises of the *Fridjof Nansen* have been submitted to SADCO by Dr Raymond Roman:

- Aug/Sep 2008, Madagascar, 114 stations
- Sept/Oct 2008, Mauritius, 30 stations

ASCLME East Coast Data

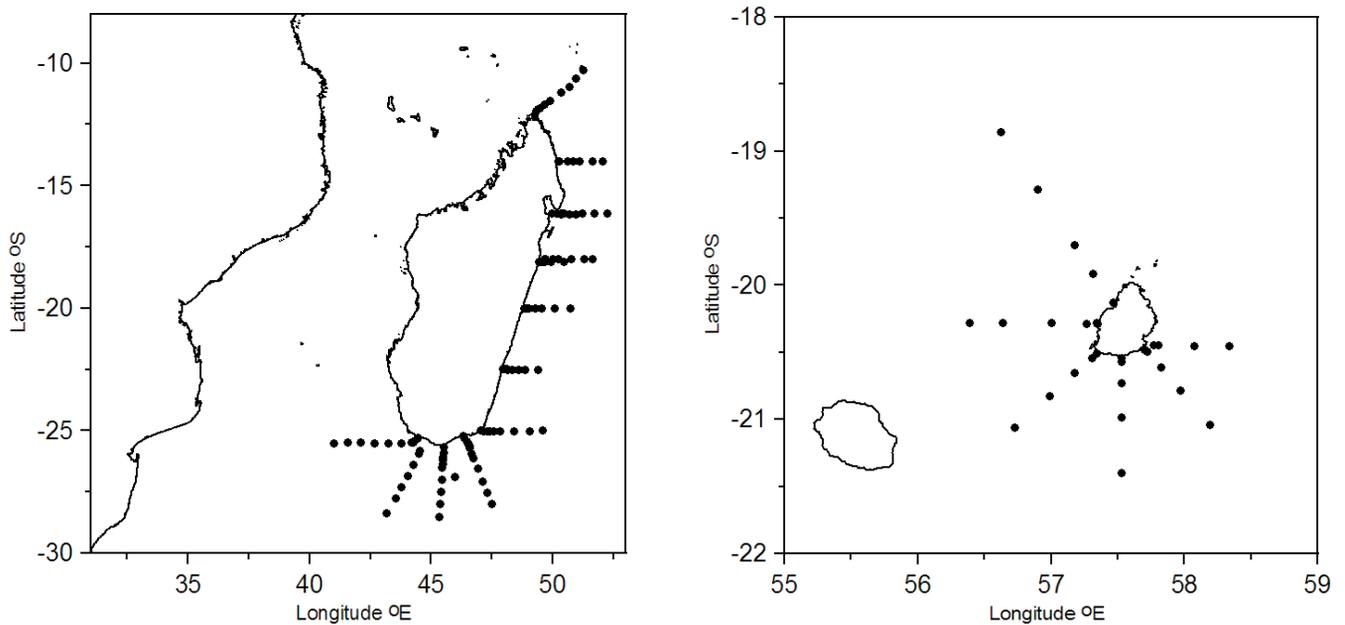


Fig. 9. Station chart of the *Fridjof Nansen* cruises off Madagascar (left) in Aug/Sep 2008, and Mauritius (right) in Sep/Oct 2008.