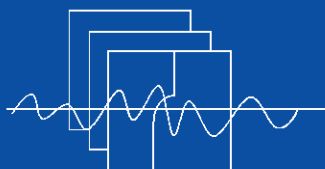


## SADCO Workplan 2006



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

Email: [mgrundli@csir.co.za](mailto:mgrundli@csir.co.za)

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

*SADCO is sponsored by ...*

Department of Environmental Affairs  
& Tourism  
SA Navy  
CSIR  
NRF (SA Universities)  
Namibian Ministry for Fisheries & Marine  
Resources

SADCO's Workplan for the Financial Year is decided by the Steering Committee in May every year. The work list contains only the non-routine activities (routine activities are assumed to continue anyway) and normally exceeds the actual amount of work that can be done within a year. At the meeting on 31 May 2006 the Steering Committee agreed to the following activities:

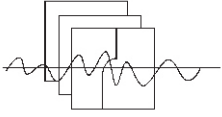
- Finalise SADCO MoU (see p. 2)
- Finalise aspects of the marine load program with quality control measures
- Marine database cleanup
- Data loading:
  - XBT data from IMT
  - Hydrographic data from NatMIRC, Germany and Japan
  - AWS\* data from MCM (Marine and Coastal Management)

- AWS\* data from South African Weather Service
- AWS\* data from Roman Rock (IMT)
- ARGO float data
- Chemical data (CSIR)
- Continuous and discrete CTD data from MCM (if supplied)
- Moored ADCP\* data from MCM (Agulhas Coelacanth Ecosystem Programme)
- GODAR (Global Ocean Data Archiving and Rescue) data from 2001/2005

The data awaiting loading is now listed on SADCO's Home Page (see p 3).

[\*AWS: Automatic Weather Station; ADCP: Acoustic Doppler Current Profiler]





# SADCO MoU

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About two years ago the SADCO Steering Committee decided that a mutual agreement between the organisations participating in and sponsoring SADCO would be beneficial. It would also contain information on SADCO's Terms-of-Reference, the roles and responsibilities of the organisations and the SADCO Manager, etc.

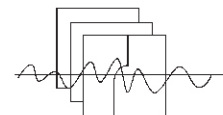
The document was amended after a number of interactions, and is presently being circulated for signing.

MoUs are often statements of intent, more than actual "contracts". The value of an MoU therefore lies largely in the spirit of the agreement, rather than the detail.

The SADCO MoU is quite comprehensive, and the Newsletter is not the appropriate place to provide any detail. It is nevertheless interesting to lift out some of the wording that embodies the spirit of the MoU.

"The MoU recognises that:

- SADCO and its predecessors have been in existence since the 1960s
- Re-established in 1990 under the new terms of reference, SADCO has succeeded in establishing a broad-based culture of oceanographic data support to the Southern African marine and maritime community, as well as becoming internationally recognised as regional facility on the African continent.
- The name change to **Southern African Data Centre for Oceanography** signifies its broader geographical footprint, and recognises the transformation of the Data Centre from a purely national entity to a regional facility.
- The funding model .... manifests the desire of (the sponsoring) organisations to collaborate and mutually support oceanographic infrastructure in the long term.
- SADCO has been successfully achieving the rather stretching goals set in 1990 under the watchful eye of representatives of the whole Southern African marine community serving on a Steering Committee.
- There is a continued and expanding need for sensible and suitable multi-disciplinary oceanographic data management in support of scientific research in oceanography and related disciplines,
- This MoU embodies the desire of the signatories for technical and scientific inter-institutional and international co-operation."



## SADCO'S DATA LOADING QUEUE

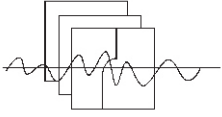
A fair amount of data is submitted to SADCO every year, in response to oceanographers having collected data, or to SADCO's scouting for data (local and foreign). Submitted data enters a "loading queue" according to priorities, the agreed work plan of the data centre, resource availability, and the quality and quantity of the data.

It was considered useful to place an inventory of the submitted data on SADCO's web site

(<http://sadco.csisr.co.za/loads.html>). The entries are not in order of priority.

Upon request some of the data will be flagged after loading. This is a service provided to data donors to restrict access to the data while they complete a degree or publication. The flagging is nominally for a period of 2 years, and it may be extended by another year. Only a small amount of SADCO data is flagged.

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<ul style="list-style-type: none"> <li><a href="#">HomePage</a></li> <li><a href="#">Services</a></li> <li><a href="#">Data and Data Loading</a></li> <li><a href="#">Access</a></li> <li><a href="#">Inventory Information</a></li> <li><a href="#">International links</a></li> <li><a href="#">Cruise Inventory</a></li> <li><a href="#">Newsletters</a></li> </ul>	<p style="text-align: center;"><b>Incoming data for SADCO database</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><i>Description</i></th> <th style="text-align: left;"><i>From whom</i></th> <th style="text-align: left;"><i>Loaded?</i></th> </tr> </thead> <tr> <td>Welwitchia ww200210 - ww200310en</td> <td>Natmirc (Bartholomae)</td> <td>Oct 2004</td> </tr> <tr> <td>ARGO floats</td> <td>Coriolis</td> <td>Not yet</td> </tr> <tr> <td>MN and RKFraay Current data</td> <td>Marten - CSIR</td> <td>Oct 2005</td> </tr> <tr> <td>CTD eg WOCE/Cither project</td> <td>SISMER</td> <td>July 2005</td> </tr> <tr> <td>Bottle eg WOCE/Cither project</td> <td>SISMER</td> <td>Not yet</td> </tr> <tr> <td>Hydrographic Profiles</td> <td>Japan</td> <td>Not yet</td> </tr> <tr> <td>Moored ADCP, Sodwana St Francis, Tsitsikamma</td> <td>MCM (Roberts)</td> <td>June 2004</td> </tr> <tr> <td>CTD and XBT</td> <td>UCT</td> <td>Aug 2004</td> </tr> <tr> <td>DDS and XBT</td> <td>IMT</td> <td>Not yet</td> </tr> <tr> <td>AWS</td> <td>MCM (Johnson)</td> <td>Sept 2005</td> </tr> <tr> <td>CTD/ADCP cooperative surveys NMR&amp;IOW</td> <td>Natmirc (Bartholomae)</td> <td>Oct 2005</td> </tr> <tr> <td>CTD Welwitchia 2003-11 to 2004-12</td> <td>Natmirc (Bartholomae)</td> <td>Oct 2005</td> </tr> <tr> <td>CTD XBT Moorings</td> <td>AWI (Grohardt)</td> <td>Not yet</td> </tr> <tr> <td>Marine Chemistry</td> <td>CSIR (Parsons)</td> <td>Partly</td> </tr> <tr> <td>Roman Rock Weather data</td> <td>IMT</td> <td>Not yet</td> </tr> <tr> <td>UTR's and Thermistors</td> <td>MCM (Roberts)</td> <td>March 2006</td> </tr> <tr> <td>Robben Island Wind data</td> <td>IMT</td> <td>Not yet</td> </tr> <tr> <td>Moz and Norway Nansen/Arpen4 Wind data</td> <td>Mozambique</td> <td>Not yet</td> </tr> <tr> <td>AWS</td> <td>SAWS (Koch)</td> <td>Not yet</td> </tr> <tr> <td>Moored ADCP</td> <td>MCM (Roberts)</td> <td>Not yet</td> </tr> <tr> <td>AWS</td> <td>MCM</td> <td>Not yet</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	<i>Description</i>	<i>From whom</i>	<i>Loaded?</i>	Welwitchia ww200210 - ww200310en	Natmirc (Bartholomae)	Oct 2004	ARGO floats	Coriolis	Not yet	MN and RKFraay Current data	Marten - CSIR	Oct 2005	CTD eg WOCE/Cither project	SISMER	July 2005	Bottle eg WOCE/Cither project	SISMER	Not yet	Hydrographic Profiles	Japan	Not yet	Moored ADCP, Sodwana St Francis, Tsitsikamma	MCM (Roberts)	June 2004	CTD and XBT	UCT	Aug 2004	DDS and XBT	IMT	Not yet	AWS	MCM (Johnson)	Sept 2005	CTD/ADCP cooperative surveys NMR&IOW	Natmirc (Bartholomae)	Oct 2005	CTD Welwitchia 2003-11 to 2004-12	Natmirc (Bartholomae)	Oct 2005	CTD XBT Moorings	AWI (Grohardt)	Not yet	Marine Chemistry	CSIR (Parsons)	Partly	Roman Rock Weather data	IMT	Not yet	UTR's and Thermistors	MCM (Roberts)	March 2006	Robben Island Wind data	IMT	Not yet	Moz and Norway Nansen/Arpen4 Wind data	Mozambique	Not yet	AWS	SAWS (Koch)	Not yet	Moored ADCP	MCM (Roberts)	Not yet	AWS	MCM	Not yet									
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## Loading of SAWS weather data



The largest and longest collector of weather data in South Africa is the South African Weather Service (SAWS).

SAWS operates a large number of automatic weather stations (AWS) in South Africa. These instruments collect atmospheric pressure, wind speed and direction and other relevant parameters 24 hours a day. Together with higher-altitude observations (e.g. by weather balloons), satellite observations etc the information from these AWS is used in numerical models for weather prediction.

While the land-based AWS data is used in numerical models to predict terrestrial as well as maritime weather, AWS data collected close to the coast also has a direct use for various marine operations, e.g.:

- Studying any coastal/inshore effects where wind plays a role.
- The design of structures on the coast or in the near-shore region often needs information on the expected wind force.
- Information on the local wind is essential in studies of Aeolian sand transport on beaches.
- Coastal operators, fishermen, beach guards, etc make use of such information for reasons of safety, recreation, tourism and so on.

As reported in the Newsletter of February 2006 SAWS

offered to supply SADCO with the hourly data from all its coastal weather stations. This is a huge amount of data, and it was kindly extracted and transmitted by Tracey Gill.

The data consists of hourly reading at 32 stations, the coverage extending from 1995 - 2005. A plot of the station positions was included in the Newsletter of February, and is included again here with positions of the MCM AWS stations included (Fig. 1).

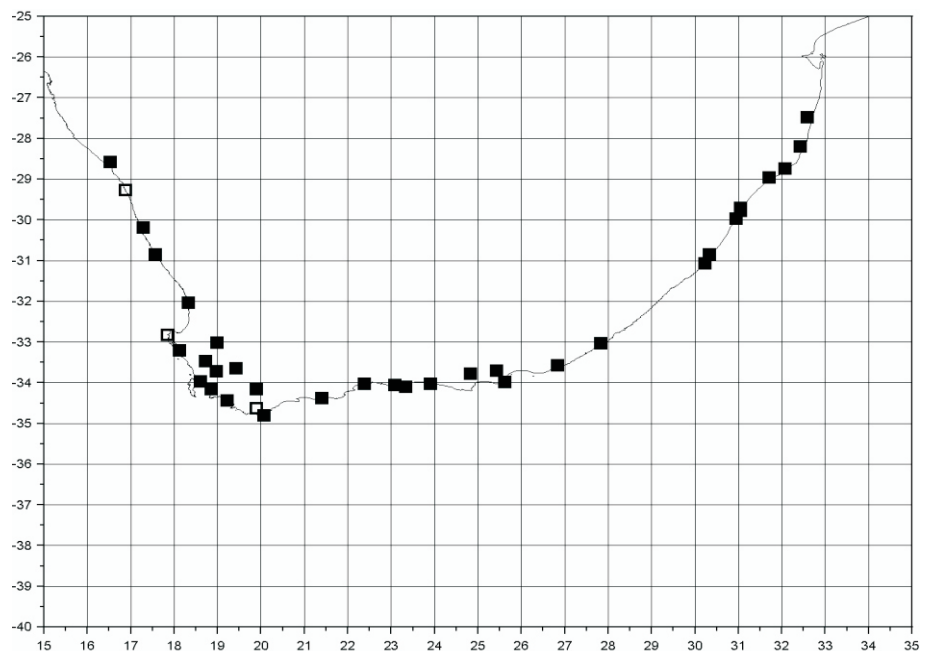


*Tracey Gill, SAWS*

An example of the type of data is shown in Fig. 2, which contains a time series of various weather parameters at Cape Town, January 2005. Fig 3 (a), (b) and (c) are the wind roses for 2005 at Durban, Cape Town and Alexander Bay, respectively.

This is a very valuable data set, and augments the AWS data supplied by MCM. Thanks again to SAWS for supplying this data!

Fig. 1 Plot of locations of Automatic Weather Stations, data of which has been submitted to SADCO by the South African Weather service (filled blocks) and Marine and Coastal Management (unshaded blocks)



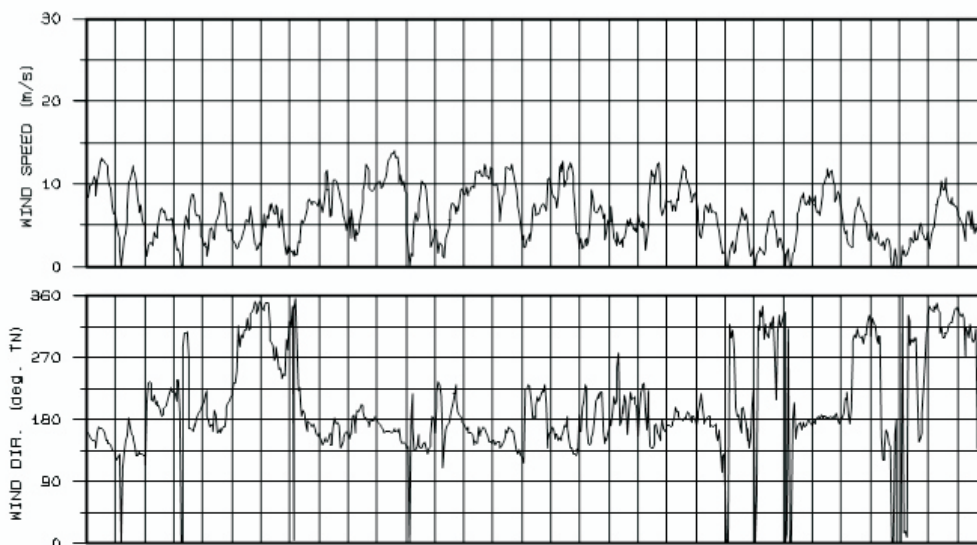
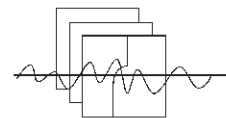


Fig. 2 Example of time series for January 2005 for the automatic weather station at Cape Town, obtained from the South African Weather Service. The panels are, from the top: wind speed and wind direction.

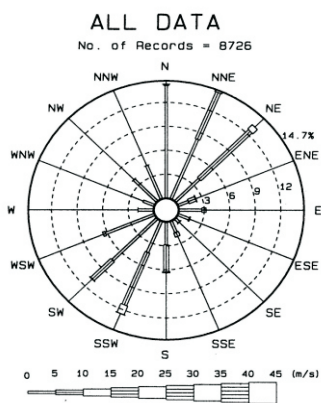


Fig. 3(a) Wind rose of Durban, 2005

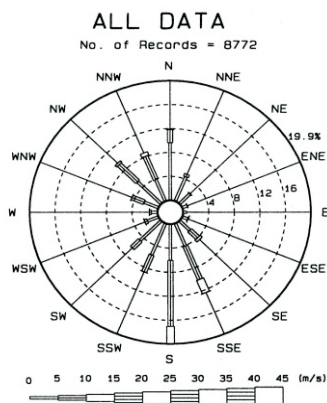


Fig. 3(b) Wind rose of Cape Town, 2005

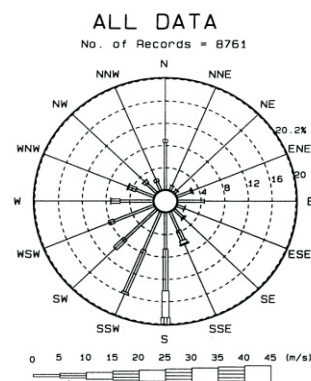
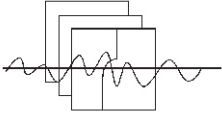


Fig. 3(c) Wind rose of Alexander Bay, 2005



# Update on AfrOBIS

## Background

OBIS, the Ocean Biogeographic Information System, is a part of the Global Biodiversity Information Facility that deals specifically with the ocean. Structurally, OBIS takes the shape of a network of regional nodes all over the world, and SADC (AfrOBIS) is the Sub-Saharan African Node.

To ensure that the appropriate framework is in place for advising and monitoring the progress, the SADC Steering Committee, as a stakeholder in AfrOBIS activities, remains the “overseeing” body. Prof Charles Griffiths, acknowledged expert on marine species, has been invited to become member of the Steering Committee.

## Terms of reference

The funding for this activity is provided by the Rutgers University (USA). The Terms-of-Reference of the agreement include:

- Establishing the software platform and local and international interface.
- Identification of the main data providers.
- Financial support for digitising some of the data.
- Creating data loading software
- Loading the data at regular intervals
- Attendance of meetings (regional and international) to report on progress.

The Contract extends from July 2004 to December 2006. Funding will need to be sourced elsewhere for continuation of the data centre beyond this period.

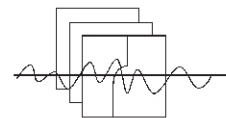
## Data scouting and loading

While the first quarter was largely devoted to establishing the data bases, portal, interface, and software, data scouting and loading only started in the second quarter. The graph (Fig. 4) indicates the present status of the scouting, submission and loading process, as well as the foreseen progress towards the end of 2006.

## Other statistics of AfrOBIS to date:

### Data:

- Number of records loaded : 194 112
- Data reformatted and ready-to-load : 90 000
- Number of data sets : 6
- Number of species : 7500
- Other digitised data in South Africa (est) : 100 000 - 150 000
- Undigitised data (est) : 150 000
- Scouting to main South African organisations : 9
- Scouting to 19 countries, 42 scientists at 21 organisations in rest of Africa. Data submitted to date: Madagascar about 4000 records; Tunisia about 7000 records.
- Interaction with ODINAfrica (IODE) to facilitate data supply (25 member states of IOC).
- Expansion of AfrOBIS to include Northern African countries
- First seaweed data in AfrOBIS will be from Herbarium, Cape Town. Contains examples of 80% of estimated 1000 species in southern Africa.



## Update on AfrOBIS

### Presentations and promotion

- 9 presentations given at 6 workshops/symposia
- > 100 individual e-mails to data providers in Africa, describing AfrOBIS.
- 9 Articles in SADCO and SANCOR newsletters
- Helped train 20 data managers from Africa (through ODINAfrica).

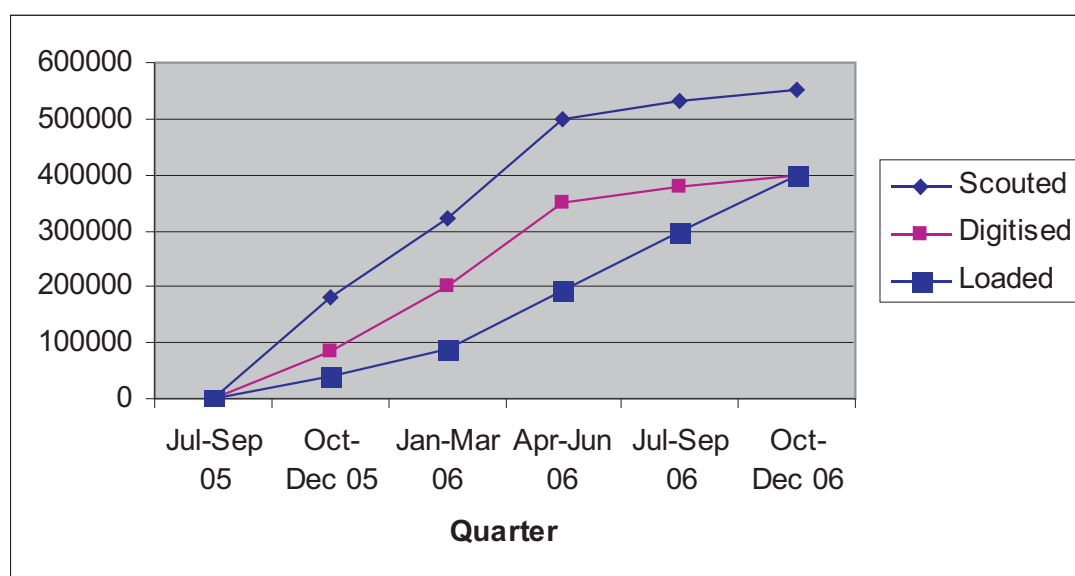
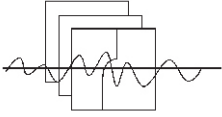


Fig. 4 Graph indicating the present and foreseen number of records handled by AfrOBIS. The “**Scouted**” line represents the number of records (digitised and undigitised) identified positively in South Africa, and a rough estimate of data available in the rest of Africa. The “**Digitised**” line shows the number of records submitted to AfrOBIS and that will be loaded. The “**Loaded**” line indicates the number of records actually loaded onto AfrOBIS. It is expected that all the presently digitised data will have been received and loaded by AfrOBIS before December 2006. The prognosis is that by that date this number may reach about 400 000, with about 150 000+ records still undigitised.





## DATA MANAGEMENT AND POWER SUPPLY

Everybody in the Western Cape has been adversely affected by interruptions of the electric power supply during the past 6 months. SADCO was not excluded. These interruptions caught everybody by surprise, since the region has never (or at least in human memory) suffered from such impacts without warning.

Because of the extent of the impacts, and because the media overflowed with reports on the issue, local on-line users would understand that the blame for non-functional systems should be placed elsewhere.

When a system, such as one for data management, serves only a small, in-house community, the effect of a power interruption is largely confined to the effect it has on the infrastructure (a possible disk crash; software impacts; harm to the databases). These effects can be extremely serious, but they would only become visible to the user community after a while (the users are without power, too).

However, when a system serves a community that is, partly at least, not subject to the same power failures, the users ARE affected by the interruption in service. They would be largely unaware of electricity problems and may attribute non-access to shortcoming in SADCO/AfrOBIS itself. Obviously, should any of the serious consequences of a power failure materialise (mentioned above), all

users are effected detrimentally over a longer period.

Remedial systems that the CSIR has introduced in Stellenbosch to counteract the electricity interruptions include:

- Installation of a diesel power generator, with automatic start-up in case of a failure of the main electricity supply. Full power for the building is restored in about 10 seconds.
- Because even short interruptions will still lead to shut-down of, and possible damage to, the work stations, networks and servers, these are covered by a short term UPS (uninterruptible power supply) specifically for the computers.
- Automatic alerting by mobile phone to key staff to check that systems are operational, so that manual interventions can be considered.

It is believed that these measures have gone a long way to ensure uninterrupted service to users of SADCO and AfrOBIS.

