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Exciting new step for SADCO: OBIS

This Newsletter reports on a possible development for SADCO, namely to revive a biological capability of SADCO that has been dormant for more than a decade.

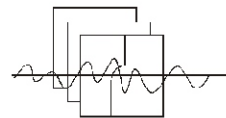
If funding is forthcoming, SADCO will become a regional hub in a network of organisations inside and outside southern Africa, to store data of relevance to the Ocean Biogeographic Information System (OBIS). (see article inside)

Apart from the interest in OBIS itself, it could open up SADCO's ability to handle biological type data on a broader base.

Since SADCO lacks much of the domain expertise in this field, it plans to approach the establishment of the facility in a co-operative basis with main role players in southern Africa.



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OBIS

SADCO has experienced quite a dramatic series of events over the past few months that may have a significant impact on what SADCO does, and how it is done.

SADCO was approached by Prof Charles Griffiths of UCT, to gauge our interest in participating in the OBIS programme.

Background

What is OBIS? The Ocean Biogeographic Information System is a part of the Global Biodiversity Information Facility that deals specifically with the ocean. OBIS takes the shape of a network of regional nodes all over the world. This is similar to the network within which SADCO operates: there are a number of national oceanographic data centres (mostly one per country), as well as regional data centres (the latter could be considered “nodes”).

OBIS is pursuing the process of establishing regional nodes, and the need for a node for southern (sub-Saharan) Africa was identified.

Prof Griffiths was a member of the OBIS panel that debated these issues, and SADCO was proposed as a candidate. This was based on the fact that SADCO is already an established data centre, and has a large amount of data, deals with organisations and countries outside South Africa (as its name suggests) and is familiar with data scouting, storing, handling and disseminating.

SADCO response

It was clear to all parties that SADCO did not really have a choice: If SADCO declined the “offer”, the possibility would be that another organisation would be found, and that, in the long run, SADCO would be marginalised in terms of ocean data provision.

However, the debate within SADCO was very

positive. Once a clearer picture was available on what is being spoken about, and the magnitude of the task, and the management of the risk, the decision was taken with a large degree of enthusiasm. SADCO's constitution includes the handling of all types of data, including biological. The stakeholders have only required that SADCO's present activities and commitments are not impacted.

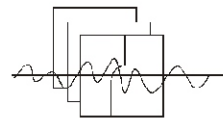
Funding will be provided (if all the submissions are eventually successful) for a period of 2 years, during which the node must be established, and as much data as possible is digitised, entered and made available internationally. Funding beyond two years will have to be sourced elsewhere.

An aspect that will present a challenge in itself, is the acquisition of data from other African countries (when even data from South Africa and Namibia is not that straightforward).

The road forward

The Centre for Marine Biodiversity at the Bedford Institute, Canada, plans to submit a collective proposal for external funding, for the establishment of the various nodes.

If this funding request is successful, and SADCO is given the go-ahead, a full proposal will be drawn up, in which an indication is given on the format of the database, the whereabouts of data that is planned to be loaded, the digitising process, with relevant time schedules.



OBIS (continued)

Conceptual design

The contacts we have had with role players in the biogeographic domain have indicated that, although some digitisation (= entry of observations into a computerised database) has been done, large amounts of data would still need to be entered from log books, card systems or similar manual index systems. This activity, and the checking that needs to be done (a very hands-on process), can only be done at the relevant institute, and by suitably experienced people. Only quality-controlled data can be made available to users.

This process is the same for physical oceanographic data presently handled by SADCO, where institutes have to ensure that their data is calibrated and checked before submitting it to SADCO (SADCO does not have the funding, nor the access to institute data records, to undertake suitable quality control).

Based on the funding, a work list will be drawn up to prioritise and schedule those data sets that can be handled. There will be suitable interaction between SADCO and the relevant institutes in terms of software compatibility etc.

At the same time, SADCO will design suitable databases, in line with international requirements and protocols provided by OBIS.

Data will then be supplied (uploaded) from the remote institute into SADCO. It is possible that the eventual configuration will have a distributed but interconnected form, with autonomous datasets at institutes and a central facility at SADCO.

There are obviously manifold issues that will have to be addressed with relevant institutes, ranging from willingness to participate, confidentiality issues, amount of data, support for digitisation, interaction procedures, etc.

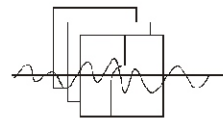
The opportunity

After its transformation in 1990, SADCO has enjoyed a large degree of success and support. The list of achievements is quite impressive, given that we are a small data centre, with limited funding, in a remote part of the world.

All this was focussed on the "core" data sets, identified by the marine community in 1990 [the data sets that did not form part of the "core" data sets were carefully considered and given back to the community, mothballed or, if duplicates existed elsewhere (e.g. with NIMBUS data tapes), discarded].

The opportunity now exists that SADCO can use its expertise to the advantage of a wider biological - marine community. If this process is started, the stakeholders must ensure that, the maximum impact is achieved during the two years for which funding is assured, since the funding beyond Year 2 is not assured. E.g., if databases are created, they must be sufficiently functional at the end of Year 2 so that they can be maintained with a lower funding level. Similarly, data digitisation must reach certain agreed milestones.

The SADCO Steering Committee recognised that the availability of funding, to make this impact, creates an opportunity that cannot be missed.



Data submission to WDC

One of SADCO's responsibilities is to submit data to the World Data Centre (Oceanography) in Washington. This responsibility is shared with data centres worldwide, and supports the use and exchange of marine data on a global basis. WDC has also kindly made its data available to SADCO.

Every couple of years, SADCO compiles a set of data that is submitted to the WDC. The last time data was submitted, was in 2001.

In preparation for another transfer, we went through the data base and identified cruises that have been submitted to the data centre for more than 2 years (this is the period that SADCO allows data to remain flagged, thus restricting access to the data. Flagged data may not be exchanged or given out to a third party without the donor's consent). Louise Watt did most of the data preparation, with Ursula v St Ange helping.



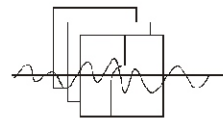
Louise Watt



Ursula von St Ange

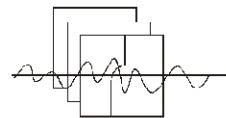
The list below represents the data that has been cleared by the Steering Committee and which is now being prepared for submission to the WDC.

Ship	Stn	Description	Cruise	Dates	Org	Data	Survey
Algoa	65	SOUTHERN BENGUELA	ALG070	Feb 00	MCM	CTD	00/0001
Algoa	59	PELAGIC RECRUITMENT	ALG071	Mar 00	MCM	CTD	00/0002
Algoa	24	PELAGIC SPAWNER BIOMASS	ALG068	Nov 99	MCM	CTD	00/0007
Africana	85	BENEFIT	AFR155	Jun - Jul 99	MCM	CTD	00/0004
Nansen	119	HAKE RECRUITMENT	NAN401	Jan - Feb 00	MCM	CTD	00/0005
Algoa	15	ST HELENA BAY MONITORING	ALG073	Apr 00	MCM	CTD	00/0008
Algoa	24	PELAGIC PRE-RECRUITMENT	ALG074	May 00	MCM	CTD	00/0009
Algoa	30	PHYSICAL OCEANOGRAPHY	ALG065	Jul - Aug 99	MCM	CTD	00/0010
Algoa	14	SNOEK SURVEY	ALG066	Sep 99	MCM	CTD	00/0011
Algoa	11	SHBML* AND SARP	ALG076	Jun 00	MCM	CTD	00/0012
Algoa	11	SHBML* AND SARP	ALG078	Jul 00	MCM	CTD	00/0013



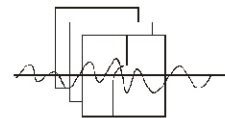
Data submission to WDC (continued)

Ship	Stn	Description	Cruise	Dates	Org	Data	Survey
Algoa	14	SHBML* AND SARP	ALG079	Aug 00	MCM	CTD	00/0014
Algoa	20	SHBML* AND SARP	ALG081	Aug 00	MCM	CTD	00/0015
Algoa	12	SHBML* AND SARP	ALG083	Sep 00	MCM	CTD	00/0016
Africana	101	HAKE RECRUITMENT	AFR129	May 95	MCM	CTD	01/0001
Africana	89	HAKE RECRUITMENT	AFR131	Sep 95	MCM	CTD	01/0002
Africana	27	SPAWN BIOMASS	AFR132	Nov 95	MCM	CTD	01/0003
Africana	105	HAKE RECRUITMENT	AFR133	Jan 96	MCM	CTD	01/0004
Africana	82	HAKE RECRUITMENT	AFR139	Jan 97	MCM	CTD	01/0005
Algoa	51	SPAWNER BIOMASS	ALG087	Nov 00	MCM	CTD	01/0006
Algoa	12	ST HELENA BAY MONITORING	ALG088	Dec 00	MCM	CTD	01/0007
Africana	74	PLANKTON DYNAMICS	AFR089	Feb 91	MCM	CTD	01/0008
Algoa	39	HAKE VERTICAL MIGRATION	ALG053	Feb 98	MCM	CTD	01/0009
Algoa	76	SQUID BIOMASS	ALG086	Oct 00	MCM	CTD	01/0010
MEwing	34	BEST 3	EWS9308	Oct - Nov 93	MCM	CTD	01/0011
Algoa	9	ST HELENA BAY MONITORING	ALG089	Jan 01	MCM	CTD	01/0012
Africana	69	PHYSICAL OCEANOGRAPHY	AFR085	Aug 90	MCM	CTD	01/0013
Africana	99	HAKE RECRUITMENT	AFR118	Jan 94	MCM	CTD	01/0014
Algoa	14	ST HELENA BAY MONITORING	ALG091	Feb 01	MCM	CTD	01/0015
Algoa	16	HORSE MACKEREL	ALG022	May 95	MCM	CTD	01/0016
Algoa	22	PELAGIC RECRUITMENT	ALG023	Jun 95	MCM	CTD	01/0017
Algoa	27	PELAGIC RECRUITMENT	ALG036	Mar 96	MCM	CTD	01/0018
Algoa	19	PELAGIC RECRUITMENT	ALG039	Jun 96	MCM	CTD	01/0019
Algoa	54	PELAGIC SPAWNER BIOMASS	ALG044	Oct 96	MCM	CTD	01/0020
Algoa	28	PELAGIC SPAWNER BIOMASS	ALG045	Nov 96	MCM	CTD	01/0021
Africana	187	PHYSICAL OCEANOGRAPHY	AFR099	Jan 92	MCM	CTD	01/0022
Algoa	10	UCT TRAINING	ALG092	Feb 01	MCM	CTD	01/0023
Algoa	81	PELAGIC PRE-RECRUITMENT	ALG093	Mar 01	MCM	CTD	01/0024
Algoa	13	ST HELENA BAY MONITORING	ALG094	Apr 01	MCM	CTD	01/0025
Nansen	98	HAKE RECRUITMENT	NAN401	Feb 01	MCM	CTD	01/0026
Algoa	42	ANCHOVY PILCHARD RECRUIT	ALG095	May 01	MCM	CTD	01/0038
Africana	48	SPAWNER BIOMASS	AFR097	Nov 91	MCM	CTD	01/0044
Africana	23	PELAGIC RECRUITMENT	AFR121	May 94	MCM	CTD	01/0045
Africana	16	PELAGIC RECRUITMENT	AFR153	May 99	MCM	CTD	01/0046
Algoa	51	PELAGIC RECRUITMENT	ALG020	Mar 95	MCM	CTD	01/0047
Algoa	13	ST HELENA BAY MONITORING	ALG096	Jun 01	MCM	CTD	01/0048
Algoa	12	ST HELENA BAY MONITORING	ALG097	Jul 01	MCM	CTD	01/0049
Algoa	14	ST HELENA BAY MONITORING	ALG098	Aug 01	MCM	CTD	01/0050
Africana	14	PELAGIC RECRUITMENT	AFR073	Jun 89	MCM	CTD	01/0051
Africana	31	SPAWNER BIOMASS	AFR078	Nov 89	MCM	CTD	01/0052
Africana	88	HAKE RECRUITMENT	AFR125	Sep - Oct 94	MCM	CTD	01/0053
Africana	32	SPAWNER BIOMASS	AFR126	Nov 94	MCM	CTD	01/0054
Africana	108	HAKE RECRUITMENT	AFR127	Jan - Feb 95	MCM	CTD	01/0055
Africana	26	PELAGIC RECRUITMENT	AFR092	May 91	MCM	CTD	01/0056
Africana	61	HAKE RECRUITMENT	AFR160	Sep 01	MCM	CTD	01/0057
M Naude	26	BATHY	MN7413	Apr 74	CSIR	OSD	74/0022
Agulhas	163	GOUGH ISLAND RELIEF	Voy 04	Oct - Nov 78	UCT	XBT	78/0091
Protea	110	MONTEVIDEO		Feb - Mar 79	UCT	XBT	79/0032



Data submission to WDC (continued)

Ship	Stn	Description	Cruise	Dates	Org	Data	Survey
M Naude	38	SHELF DYNAMICS	MN7907	Apr 79	CSIR	OSD	79/0061
M Naude	8	SHELF DYNAMICS	MN7912	May 79	CSIR	OSD	79/0107
Agulhas	111	GOUGH/BOUVET	Voy 08	Jun - Aug 79	UCT	XBT OSD	79/0114
M Naude	9	SHELF DYNAMICS	MN7922	Sep 79	CSIR	OSD	79/0145
M Naude	6	AGULHAS TRANSPORT	MN7923	Sep 79	CSIR	OSD	79/0147
Agulhas	72	KRILL CRUISE	Voy 12	Feb - Apr 80	UCT	XBT OSD	80/0037
Agulhas	72	MARION RELIEF	Voy 14	May - Jun 80	UCT	XBT	80/0087
M Naude	13	SHELF DYNAMICS	MN8013	Jun 80	CSIR	OSD	80/0104
M Naude	5	NATAL SHELF DYNAMICS	MN8016	Jul - Aug 80	CSIR	OSD	80/0133
Agulhas	124	SANAE 22	Voy 17	Dec 80 - Jan 81	UCT	XBT	80/0240
Agulhas	164	FIBEX	Voy 18	Feb - Mar 81	UCT	XBT	81/0031
Agulhas	166	SANAE	Voy 23	Jan - Feb 82	UCT	XBT	81/0095
Agulhas	81	SANAE	Voy 24	Dec 82 - Jan 83	UCT	XBT	82/0104
Agulhas	27	SANAE 25	Voy 34	Dec 83	UCT	XBT	83/0092
Agulhas	176	SIBEX	Voy 35	Mar - May 84	UCT	XBT	84/0021
Agulhas	36	SANAE 26	Voy 39	Dec 84 - Jan 85	UCT	XBT	84/0096
Agulhas	68	MARION ISLAND II	Voy 41	Aug - Sep 85	UCT	XBT	85/0039
Agulhas	61	SANAE	Voy 43	Feb - Mar 86	UCT	XBT	86/0007
M Naude	42	AGULHAS BANK DYNAMICS	8603B	Feb 86	CSIR	CTD	93/0003
M Naude	144	AGULHAS BANK DYNAMICS	8603C	Mar 86	CSIR	CTD	93/0004
M Naude	94	MN CRUISE	8619	Dec 86	CSIR	CTD	93/0005
M Naude	62	OFFSHORE FLUX/ABS	8714	Oct 87	CSIR	CTD	93/0006
M Naude	69	DURBAN - MAURITIUS	8712	Sep 87	CSIR	CTD	93/0009
M Naude	141	FALSEBAY	8909	Apr 89	CSIR	CTD	93/0010
Africana	91	PELAGIC BIOMASS	AFR047	Aug 86	MCM	CTD	93/0023
Algoa	38	MOZAMBIQUE SCAD SURVEY	ALG014	Jun 94	MCM	CTD	95/0001
Africana	121	SOUTH COAST DEMERSAL	AFR122	Jun94	MCM	CTD	95/0002
Africana	95	BENGUELA ECOLOGY PROGR	AFR102/	Apr 92	MCM	CTD	95/0008
Africana	59	WEST COAST HAKE BIOMASS	AFR088	Jan 91	MCM	CTD	95/0009
Africana	14	SOUTH COAST HAKE BIOMASS	AFR081	May 90	MCM	CTD	95/0012
Africana	95	WEST COAST HAKE BIOMASS	AFR075	Jul - Aug 89	MCM	CTD	95/0014
Africana	25	BEST I	OA105	Jun- Jul 92	SFRI	CTD	95/0023
Africana	58	PELAGIC	AFR079	Mar 92	MCM	CTD	95/0026
Algoa	32	AGULHAS BANK BIOMASS	ALG010	Mar 94	MCM	CTD	95/0063
Algoa	16	SQUID VOYAGE 001	ALG001	Jul 93	MCM	CTD	95/0071
Africana	40	ANTARCTIC KRILL	AFR080	Feb 90	MCM	CTD	96/0005
Africana	22	MACKEREL SURVEY	AFR096	Oct 91	MCM	CTD	96/0007
Africana	128	HAKE BIOMASS	AFR100	Feb 92	MCM	CTD	96/0008
Africana	107	SOUTH COAST BIOMASS	AFR106	Sep 92	MCM	CTD	96/0009
Africana	24	MACKEREL SURVEY	AFR107	Aug 92	MCM	CTD	96/0010
Africana	15	HAKE BIOMASS	AFR036	Oct 85	MCM	CTD	96/0037
Africana	55	ANCHOVY BIOMASS	AFR087	Nov 90	MCM	CTD	96/0049
Africana	87	SOUTH COAST DEMERSAL	AFR135	Apr 96	MCM	CTD	96/0084
RSA	161	SANAE	Voy 19	Feb - Mar 78	UCT	XBT	96/0102



Data submission to WDC (continued)

Ship	Stn	Description	Cruise	Dates	Org	Data	Survey
Africana	27	AGULHAS EDDY SHELF DYN	AFR138	Dec 96	MCM	CTD	97/0003
Queen	65	QUEEN CRUISE	QU6201	Oct - Dec 62	CSIR	OSD	98/0001
Queen	253	QUEEN CRUISE	QU6301	Jan - Dec 63	CSIR	OSD	98/0002
Queen	159	QUEEN CRUISE	QU6401	Jan - Aug 64	CSIR	OSD	98/0003
RSA	70	RSA CRUISE	6501	Jun 65	CSIR	OSD	98/0004
RKFRAAY	40	FRAAY CRUISE	RK6603	Jun 66	CSIR	OSD	98/0005
M Naude	36	M NAUDE CRUISE	MN6812	Jul 68	CSIR	OSD	98/0006
M Naude	16	M NAUDE CRUISE	MN7408	Mar 74	CSIR	OSD	98/0008
M Naude	101	M NAUDE CRUISE	MN7423	Aug - Sep 74	CSIR	OSD	98/0009
M Naude	46	M NAUDE CRUISE	MN7428	Oct 74	CSIR	OSD	98/0010
Africana	69	SOUTH COAST DEMERSAL	AFR144	Apr 97	MCM	CTD	98/0019
Algoa	23	RED TIDE SURVEY	ALG048	Apr 97	MCM	CTD	98/0025
Algoa	80	PELAGIC PRE-RECRUITMENT	ALG054	Mar 98	MCM	CTD	99/0006
Algoa	26	ANCHOVY PILCHARD RECRUIT	ALG056	May 98	MCM	CTD	99/0007
Algoa	20	SNOEK AGGREGATIONS	ALG057	Aug 98	MCM	CTD	99/0008
Algoa	39	SARP/TRAINING CRUISE	ALG058	Sep 98	MCM	CTD	99/0009
Algoa	26	PELAGIC PRE-RECRUITMENT	ALG063	Mar 99	MCM	CTD	99/0031
Africana	84	DEMERSAL BIOMASS NAMIBIA	AFR150	Jan 99	MCM	CTD	99/0035

Inventory of Stations (as opposed to observations)

SADCO's inventory has always portrayed the number of observations. Only through intervention of one of SADCO's staff could an inventory of the number of stations be obtained.

In the past there used to be closer (but still rough) relationship between the number of observations and the number of stations on which the observations were collected. The reason for this was that data was collected at standard depths.

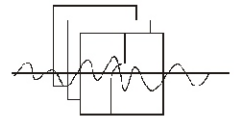
The use of CTDs as primary measurement platform introduced a major discrepancy in observation counts: While a conventional bottle data station produced, say, 20 values (depending on depth), an adjacent CTD station would produce 2000.

This product, namely to obtain the number of stations (whether CTD or bottle or XBT) as opposed to the number of observations, has now been automated.

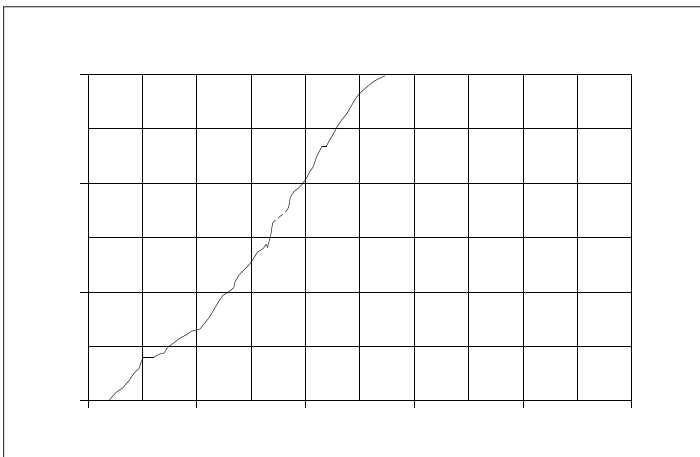
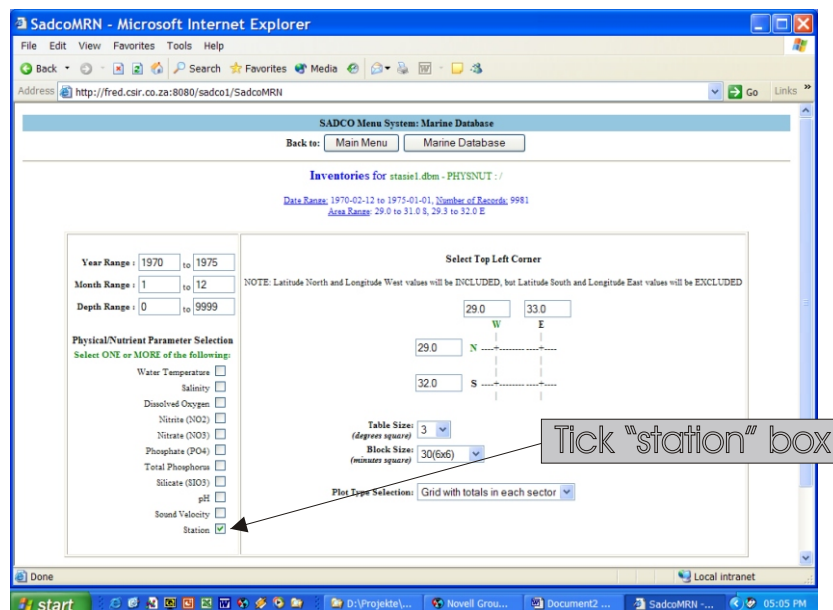
After extracting hydrographic (= station) data in a certain area and for a certain period, proceed to the "products" option. Toggle the "station" box (see Fig. 1).

The product can be downloaded to your PC (instructions on the screen), and sent to a local printer, or drawn into a word processor.

The two products in Fig. 2 and 3 were created from the same extraction, to indicate the difference between the number of stations, and the number of temperature observations. Slight differences are due to the one graph portraying "stations" and the other "temperatures".



Inventory of Stations (continued)



Left: Distribution map of hydrographic stations in the vicinity of Durban, 1970-1975.

Below: Distribution of temperature observations in the vicinity of Durban, 1970-1975.

