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SADCO is sponsored by ...


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



Registration takes less than a minute!

In the June edition of the SADCO newsletter it was reported that SADCO has established – for the first time since the Centre's re-opening 20 years ago - universal access to its data archive for research purposes. Previously, users could browse the data inventory without registration or log-in (this can still be done), but on-line extraction was only possible for the sponsors of the data centre. Now, in order to extract data on-line within the new SADCO open-access configuration, users need to register first, and this takes only a minute or so!

- ▶ The first step is to go to the SADCO website at <http://sadco.csir.co.za/> and click on the  button (see Fig. 1).
- ▶ This will open the SADCO user-registration page (Fig. 2) that needs to be completed. The required information includes a password of your own choice.
- ▶ It is required to accept the “agreement for use of data” statement, and to remember that if you are using the SADCO data in a publication that the data centre should be acknowledged as indicated.

- ▶ Clicking on the registration button at the bottom of the page will produce the “thank you for registering for the SADCO inventory” page (Fig. 3). This will be confirmed by an e-mail with your log-in particulars. As a registered user you will now be welcome to extract the data of your interest. Remember if you should have any problem whatsoever to 

Since opening the access to SADCO about two months ago 36 user-registrations have been received regionally and internationally (from as far afield as the U. S. A., Australia and Mauritius). SADCO hopes that many more will make use of this opportunity in future!

Figure 1/...

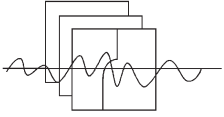


Fig. 1. The SADCO welcoming website page. The arrow indicates the registration button.



Fig. 2. The SADCO user-registration website page with registration form and the "agreement for use of data".

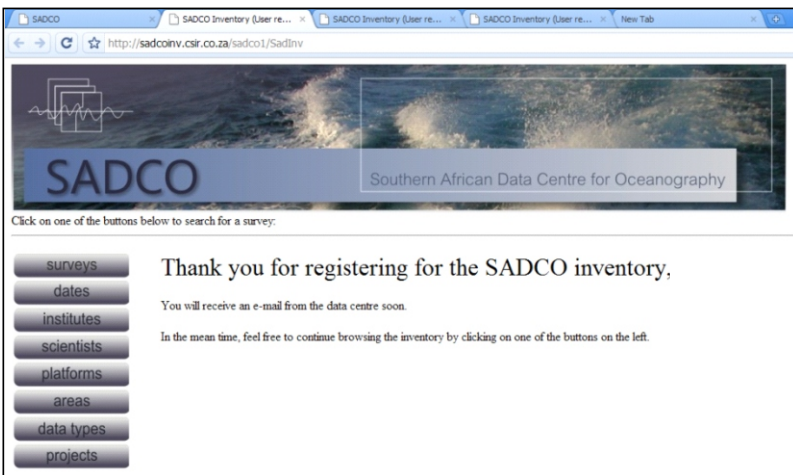
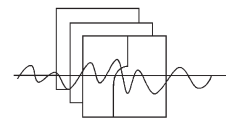


Fig. 3. The SADCO website page acknowledging that you have completed the registration form successfully.



Namibia releases data from 90 cruises

If requested by a data provider, SADCO can flag submitted data for up to 3 years after date of submission. Flagging of data is normally done when the archived data is not ready yet for public release, or when it is being written-up for publication, or for other security reasons (in the latter case it may be flagged indefinitely). Flagged data is not available for extraction by any other party besides the data provider. However, it can happen that data residing on the database for some time is “overlooked” during unflagging, with the result that the data remains flagged for more than 3 years.

Recently the National Marine Information and Research Centre (NATMIRC) of the Namibian Government unflagged data from 90 cruises (about 59%) of a total of 183 cruises that they have archived with SADCO. The 90 cruises span the period 1974 to 1999 and involve some 5 343 stations located within the rectangle 6 - 31° S, 4 - 17° E. The surveys were mainly conducted by the Research Vessels *Fridjof Nansen* (61 cruises) and *Welwitschia* (23 cruises) for commercial fisheries surveys during which hydrographic data was also collected. Figures 4 and 5 illustrate the station charts of two of the surveys on the Namibian continental shelf that have now been released.

Another 306 (5%) of the 5 798 surveys stored on the SADCO database remain flagged.

The Namibian principal investigators on most of the ninety cruises were Ms. Anja van der Plas and Mr. C. Bartholomae, both of whom serve as Namibian representatives on the SADCO steering committee. They are thanked for releasing this data.

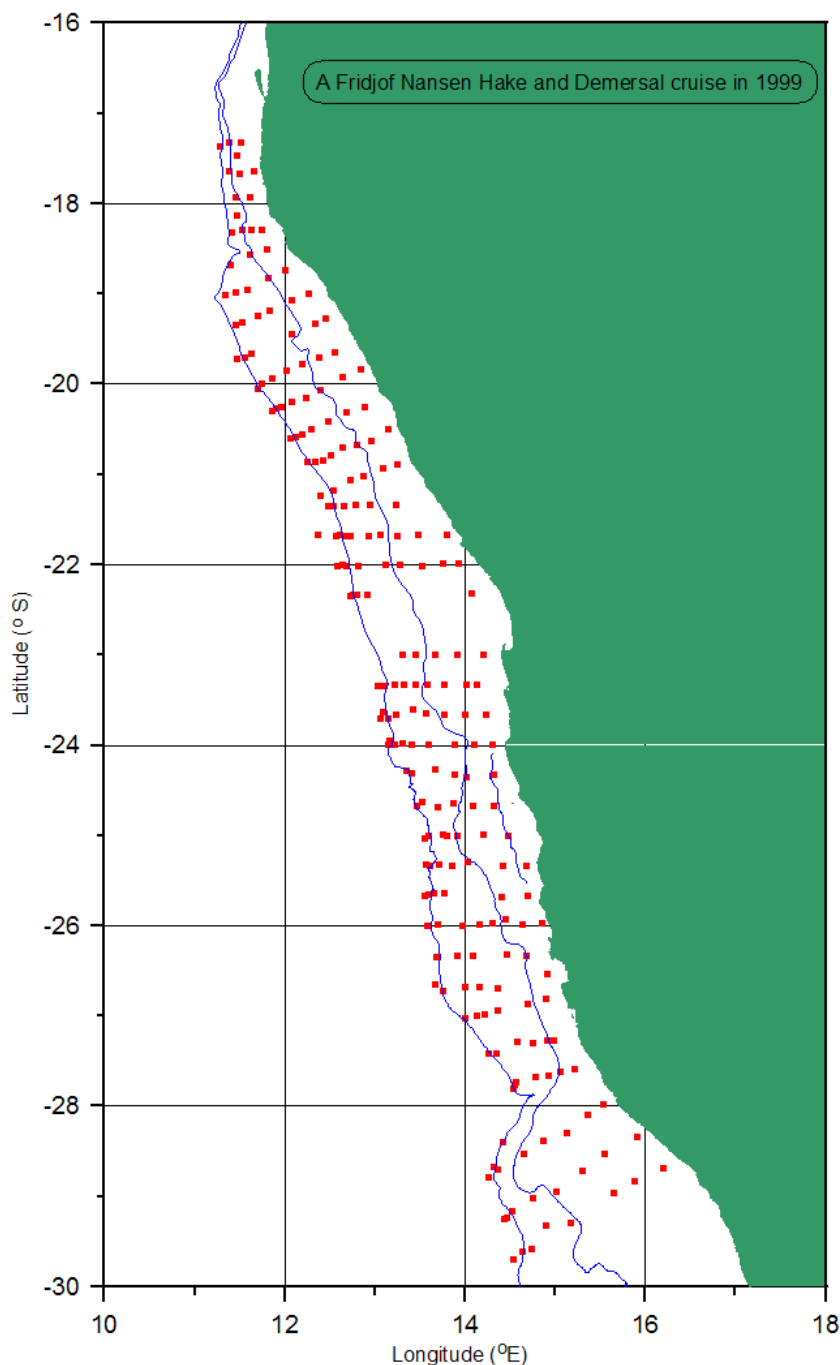
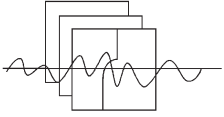


Fig 4. Example of a cruise of the RV *Fridjof Nansen*, surveying the hake and demersal stock off Namibia in 1999, that has now been released. A total of 227 hydrographic stations were executed during this intensive survey.



Namibia releases data from 90 cruises

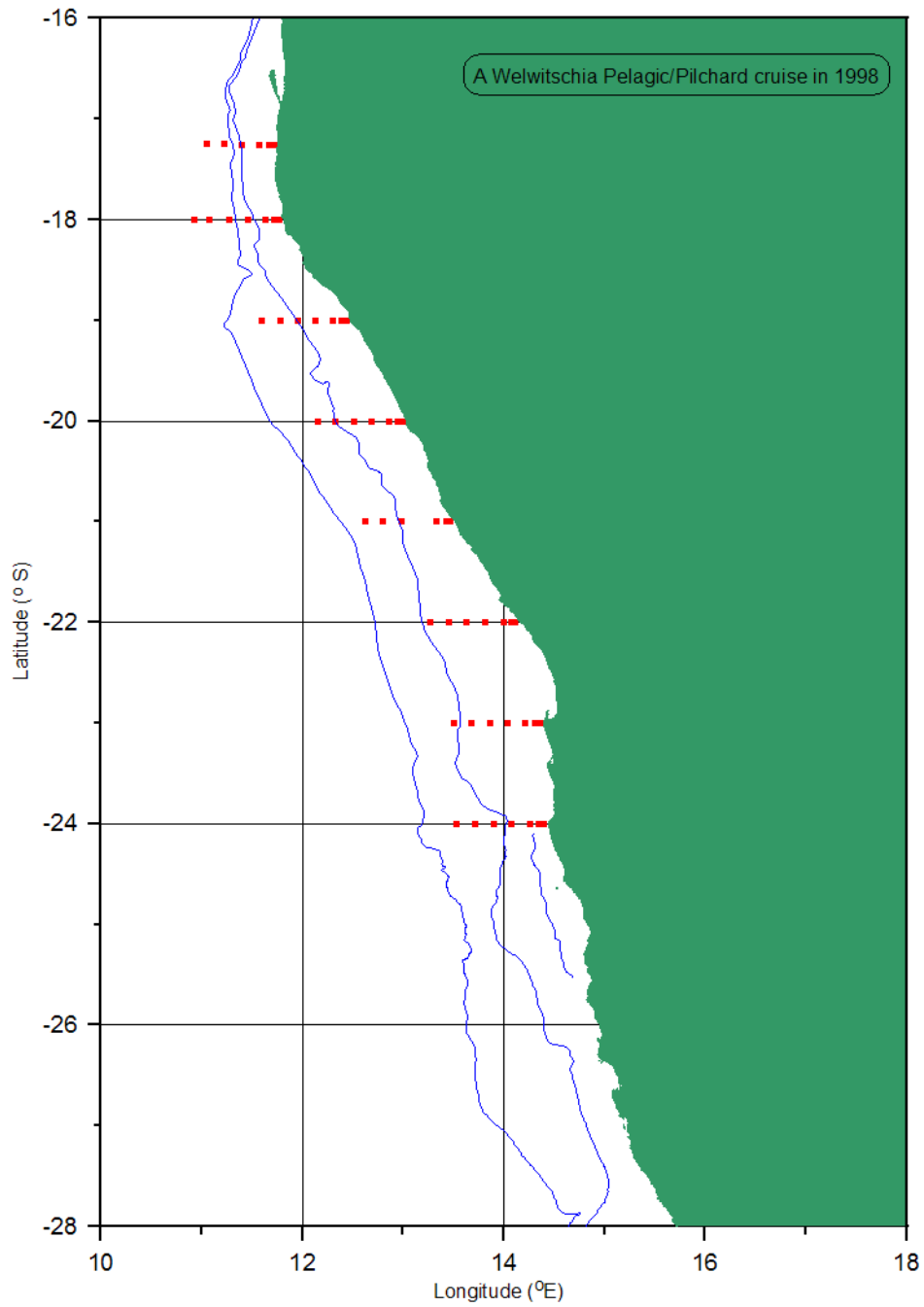
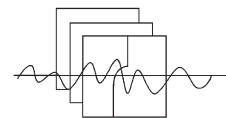


Fig. 5. Example of a RV *Welwitschia* Pelagic/Pilchard cruise in 1998 which has been released.



Hydrographic profiles along isobaths

Oceanographers normally collect and display data at right angles to the coast, since this is how the gradients of temperature, salinity and other parameters, are normally greatest.

SADCO recently extracted data for Anja van der Plas (NATMIRC) along a few isobaths, to show variability parallel to the coast.

The extraction of variables along a given isobath is not a standard product, and it is uncertain whether there is any need to incorporate it into the extraction menu. In the mean time, requests for this kind of extraction can be submitted to SADCO by e-mail to be handled off-line.

Data extraction

- For the data to be extracted, a lat/long rectangle is defined within which the particular isobath is situated.
- Ursula von St Ange** wrote a routine that visits each hydrographic station in that rectangle, and selects those with a reported bottom depth falling within a selected window (say, within 20m of the selected isobath) (see Fig. 6, extraction around 200m).
- The same process was repeated, but in stead of the reported bottom depths, the programme used the Etopo2 (satellite) data as a proxy for the bottom depth. The stations extracted this way are plotted in Fig. 7. It is interesting to note that the reported bottom depth seems to show a larger geographic spread of station positions (stations located away from the GEBCO 200m isobath) than the Etopo2 depths.
- The stations are extracted in ODV format (Ocean Data View), so it needs only one click to import the data into ODV.

Plotting of the data

Because many researchers do not use ODV every day, here is the quick "101 Introduction" to plot the section (just to get you started):

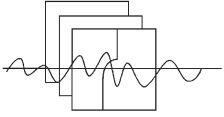
- It is assumed that ODV is available on your PC (remember, it can be downloaded free of charge from AWI).
- Right-click on the data file and "open with" ODV.

ODV provides a powerful tool to enhance extracted data by visualising station positions, creating data subsets and contouring variables

- ODV will automatically plot the station positions in one of its windows. In this case, the stations extracted with the "Etopo bottom depths" were used (Fig. 8).
- Right-click somewhere on open space, and select "Layout templates" and then "1 section window" (this draws one section only)
- Right-click on the chart with plotted stations, then select "Manage section" and "Define section"
- The station chart enlarges (Fig. 8), to allow the section to be defined.
- A straight section can be defined by clicking on the start position and double-clicking on the end position (or press Enter).
- A "curved" track can be selected by successively clicking along the desired route. Pressing "Enter" ends the section. The section is not just a single line but actually an envelope (see Fig. 9). This can be "widened" in the left-bottom box.
- Right-click on the graph where the section has now been plotted and set "X variable (= Distance), Y variable (= depth) and Z variable (= temperature)
- Also select "Set ranges" here and adjust the scales.
- To contour the data, right-click on the section, and select "Properties"
- Select the "Display Style" tab, then "Gridded field" "Quick gridding" (there are also other gridding options)
- Select the "Contours" tab, click on the "<<" button in the middle (to select the contour intervals. Click OK).

And this should produce a contoured section. The gridding type and contour interval can be modified (as can a lot of other things, but now you should have an idea where to look for them).

The temperature and salinity sections shown in Fig. 10 and 11, respectively, were contoured using the "Weighted Average" gridding option. The two sections show the fronts located just off Cape Town, where changes are visible in the longitudinal temperature and salinity structure.



Hydrographic profiles along isobaths

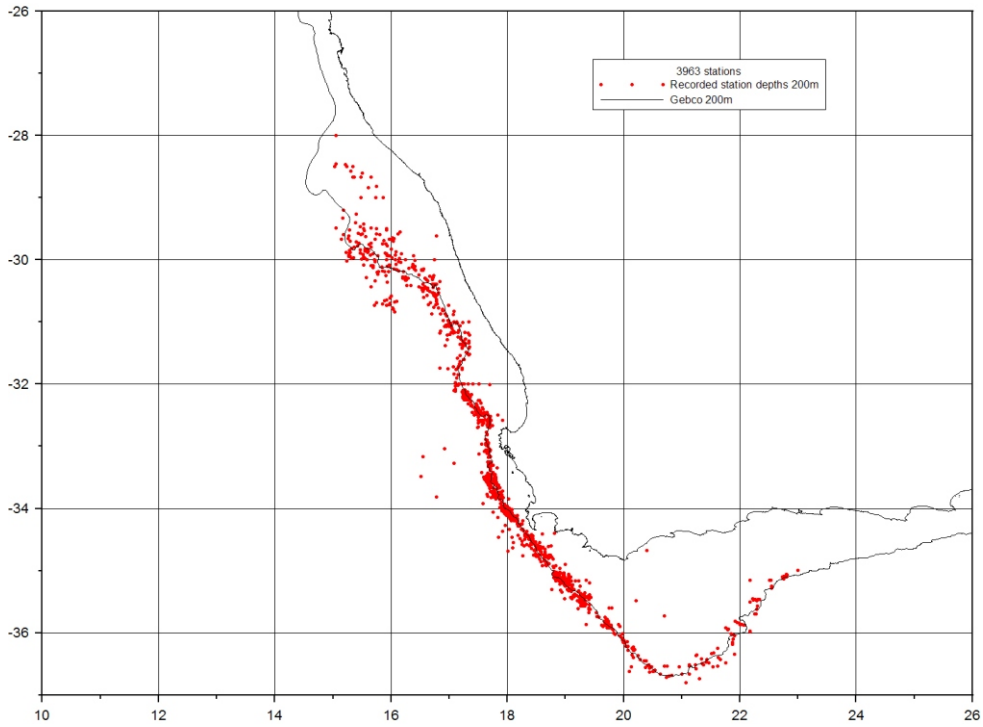


Fig. 6. Stations that were extracted using the **bottom depth recorded on station** between 180 and 220 m. Also indicated is the GEBCO 200m isobath.

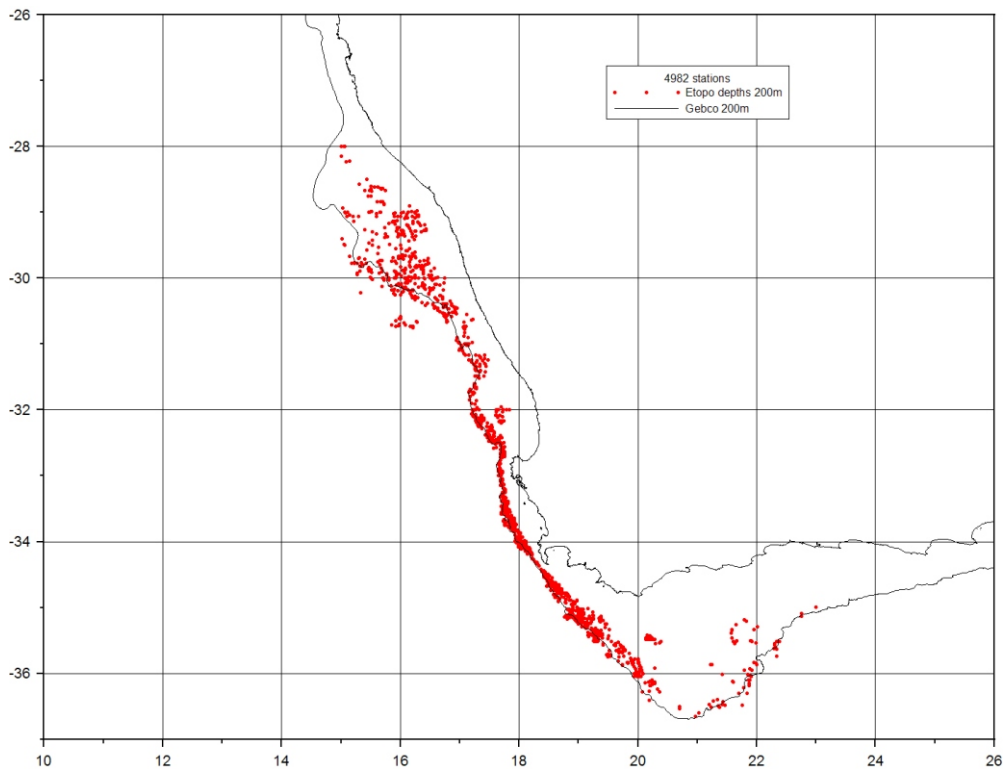
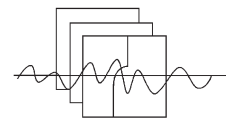


Fig. 7. Stations that were extracted using the **Etopo depth** (as a proxy of the bottom depth) between 180 and 220 m. Also indicated is the GEBCO 200m isobath. Note that the station locations show a smaller geographic spread compared to Fig. 6.



Hydrographic profiles along isobaths

Fig. 8. Positions of stations extracted along the 200m isobath using the Etopo depths (see Fig. 7), imported in ODV.

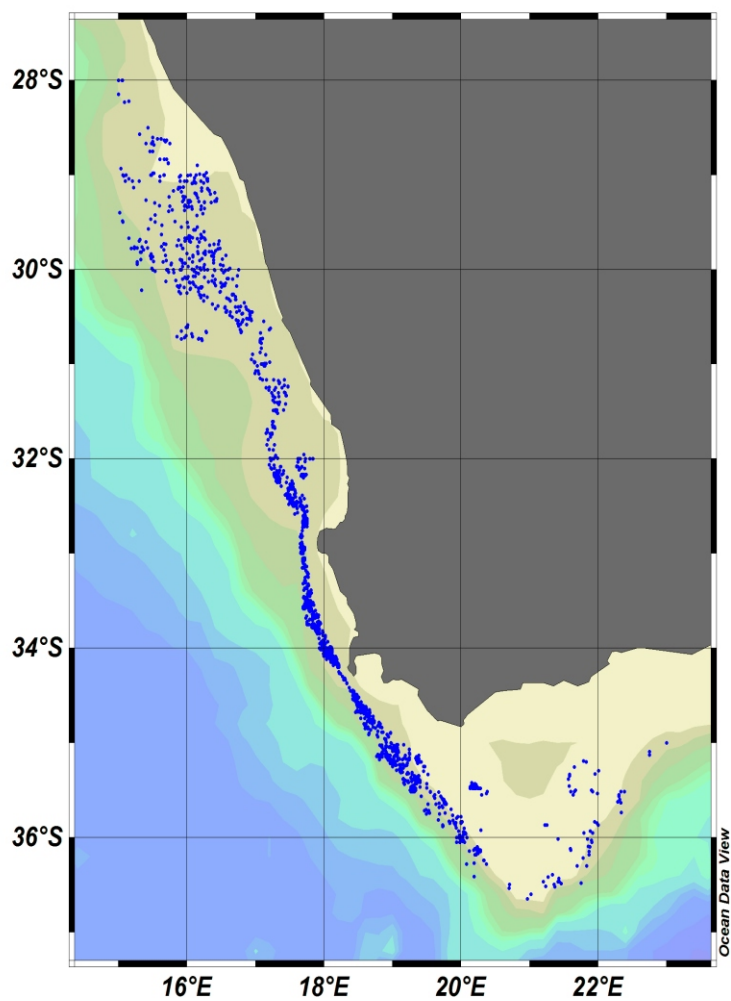
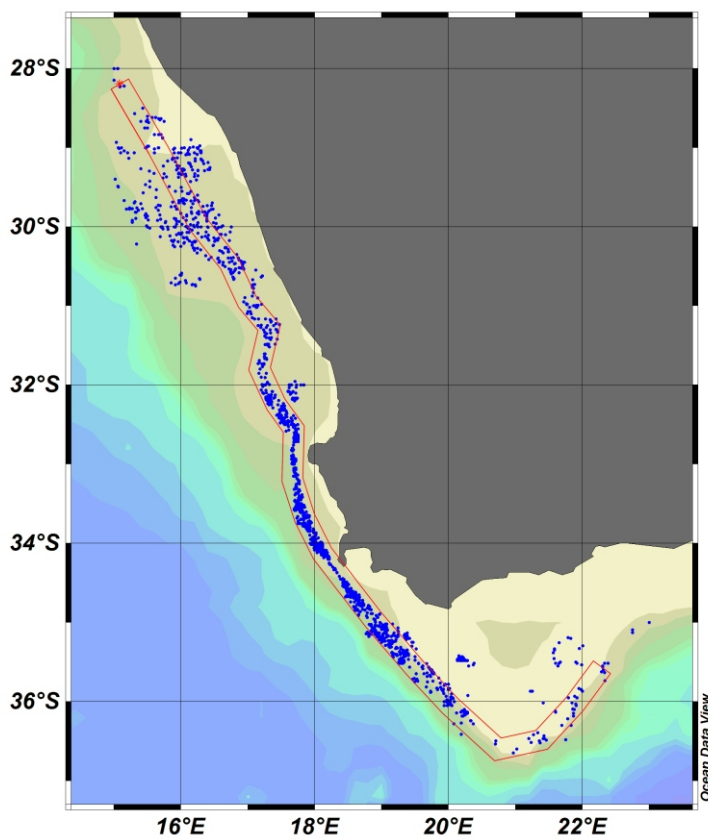
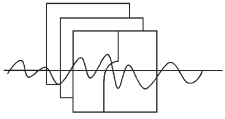


Fig. 9. Envelope selected around the hydrographic stations (Fig. 8), to define the section in ODV.





Hydrographic profiles along isobaths

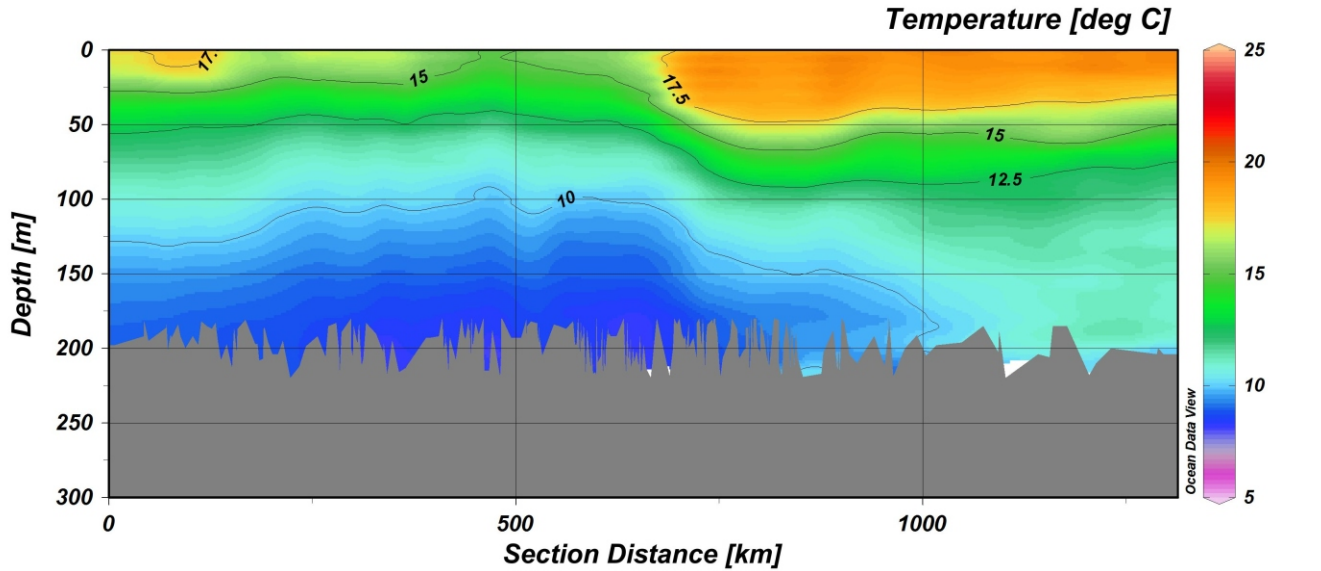


Fig. 10. Contoured temperature section along the transect indicated in Fig. 9. The variations in bottom depth arise from the depth window selected for the extraction (bottom depth 180 – 220m).

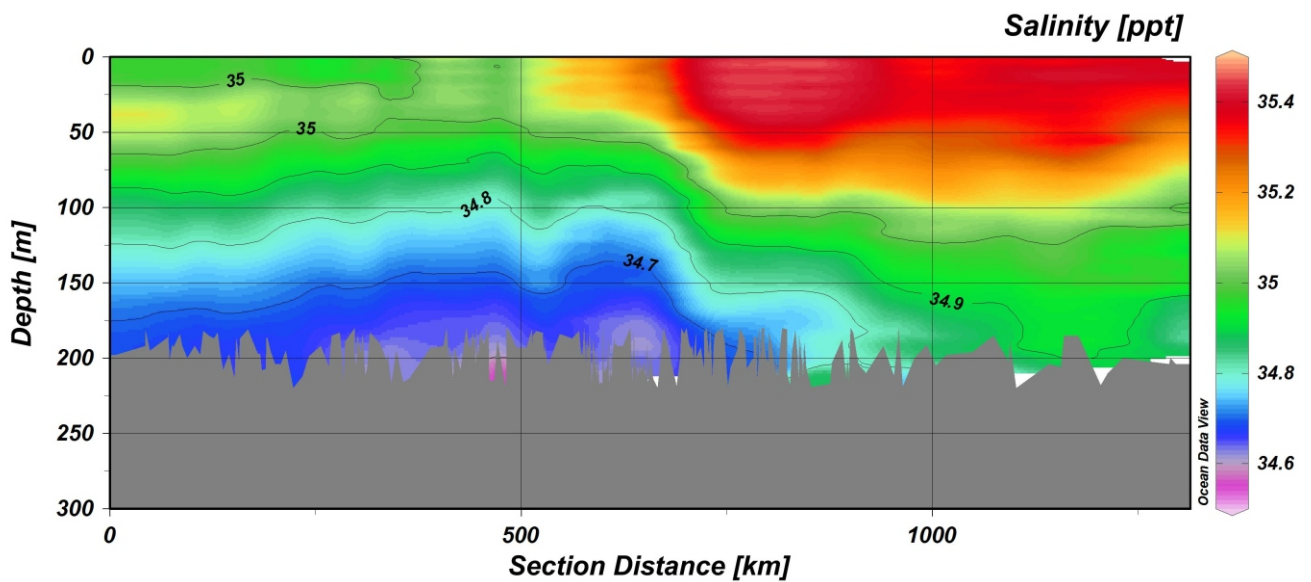


Fig. 11. Contoured salinity section along the transect indicated in Fig. 9.