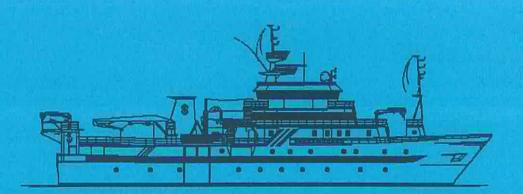
NORAD - FAO/UNDP PROJECT GLO 92/013

CRUISE REPORTS "DR. FRIDTJOF NANSEN"



SURVEYS OF THE FISH RESOURCES OF ANGOLA

Preliminary Report Cruise No 1/94 21 February - 16 March 1994

Institute of Marine Research IMR, Bergen Institute of Fisheries Research IIP, Luanda

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CHAPTER 1 INTRODUCTION

1.1 OBJECTIVES

The main objectives of the survey were to map the distribution and estimate the abundance of small pelagic fish in the region Cabinda-Benguela, including:

- * sardinella
- * Cunene horse mackerel
- * other pelagic fishes

In addition, the shelf between Tombua and Benguela would be covered as part of a joint survey with Namibia to assess the sardine stock.

Other objectives included mapping the overall hydrographic regime by using a CTD-sonde on stations distributed all over the survey area and to monitor the temperature, salt and oxygen regimes on the IIP standard profiles for hydrographical studies.

On-the-job training, particularly on the utilization of the acoustic system for stock assessment purposes and general methodology in oceanographic research, would be carried out, on a daily basis, for Angolan participants. This aspect is emphasized in this new phase of the 'Dr. Fridtjof Nansen' programme, that aims, besides the basic resource investigations, to increase national competence in fishery and oceanographic research.

1.2 PARTICIPATION

The scientific staff consisted of:

From IIP, Luanda:

António Fontes Pereira, N'Kossi Luyeye, Fernando Gombo (from 27/2), Anizabel P. Teixeira (from 27/2), Quilanda Fidel (from 27/2), Enoque G. Vasco (from 27/2).

From IMR, Bergen:

Tore Strømme (to 27/2), Reidar Toresen (from 27/2), Tor Gammelsrød (from 27/2), Oddgeir Alvheim, Terje Haugland and Martin Dahl.

1.3 NARRATIVE

The survey started at Cunene when the vessel entered Angolan waters from the south. At first, the area from Cunene to Tombua was surveyed with systematic parallel transects approximately 5 nautical miles apart, from the shore to the 100 m isobath. Baia dos Tigres was also surveyed. The acoustic survey was temporarily ended off Tombua for a call in Luanda, from 23 to 27 February. The vessel left Luanda and steamed south to Benguela where the survey was resumed by systematic triangular transects, from shore to the 200 m isobath, the endpoints of the transects being approximately 10 naut.miles apart. In areas where pelagic fish aggregations were recorded, surveying was conducted both during day-and nighttime. In the area from Benguela to Luanda, pelagic fish were recorded more or less continuously and this area was therefore surveyed more thoroughly. A few additional areas with very high recorded densities of sardinella were covered twice during daytime to ensure proper sampling both biologically, by trawling, and acoustically. In the area north of Luanda, between Ambriz and the Congo River, a 10 nautical mile wide zone along the coast was not covered for security reasons. The Cabinda region was only partially covered because of oil drilling activities.

1.4 SURVEY EFFORT

Fig. 1a-c shows the cruise track with fishing stations and the hydrographic profiles.

The number of hauls per area and depth interval, can be summarized as follows:

	Pelagic	Bottom	Distance
	hauls	hauls	surveyed
Cabinda-Luanda	20	6	1 380 nm
Luanda-Beng.	31	2	1 750 nm
BengCunene	3		360 nm

The total number of CTD stations were 93.

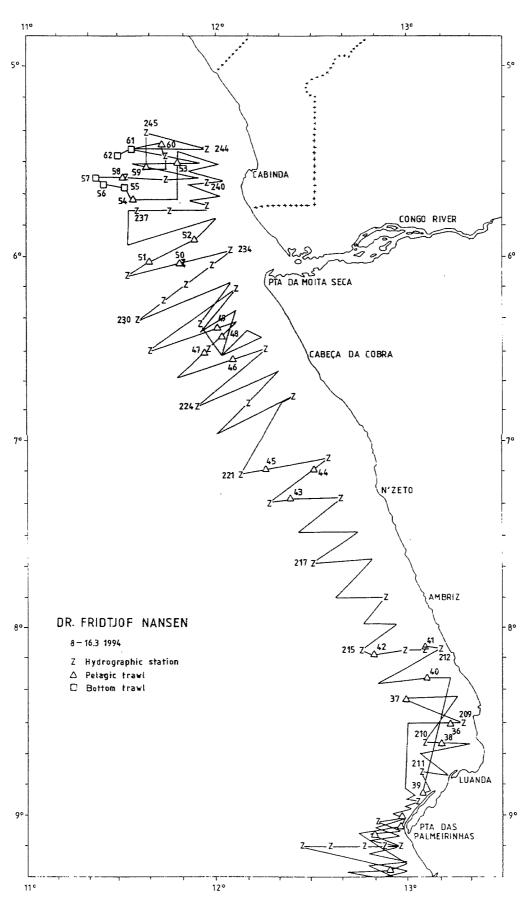


Figure 1a. Course tracks with fishing stations and hydrographic profiles, Cabinda-Luanda.

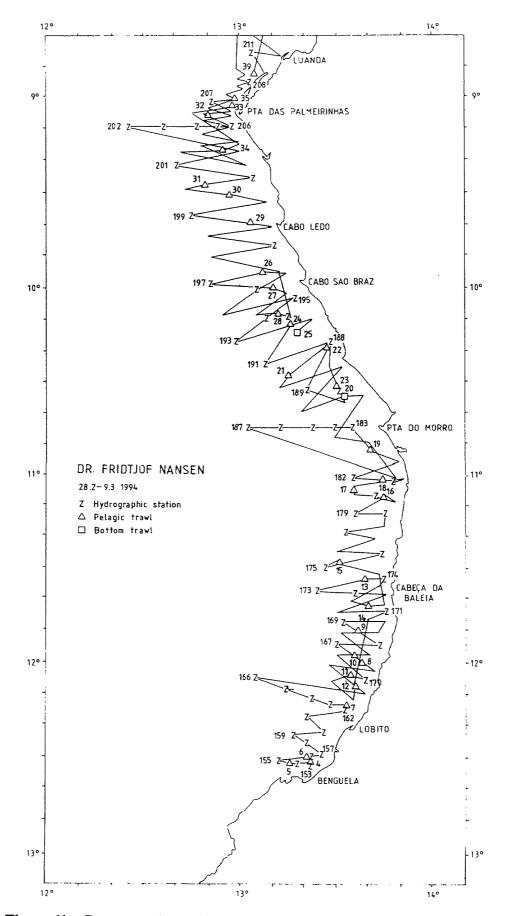


Figure 1b. Course tracks with fishing stations and hydrographic profiles, Luanda-Benguela.

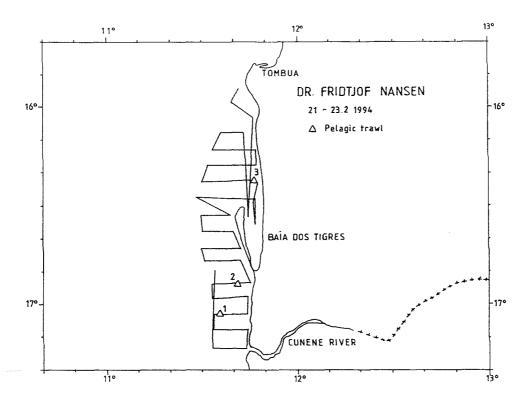


Figure 1c. Course tracks with fishing stations and hydrographic profiles, Tombua-Cunene.

1.5 METHODS

The catches were sampled for species composition, by weight and numbers. Biological samples, i.e length and weight compositions were taken for the target species. Records of fishing stations are presented in Annex I.

A description of the acoustic instruments and their standard settings are given in Annex II. This also includes a description of the fishing gear used. The following target strength (TS) function was applied to convert S_A -values (mean integrator value for a given area) to number of fish (pilchard, sardinella and Cunene horse mackerel):

$$TS = 20 \log L - 72 dB$$
 (1)

or on the form $C_F = 1.26 \cdot 10^6 \cdot L^{-2}$

where L is total length and C_F is the fish conversion factor. The following formula was programmed into Excel (4.0) sheets to calculate the number of fish in length groups (cm) for each fish concentration:

$$N_{i} = A \cdot S_{A} \cdot \frac{p_{i}}{\sum_{i=1}^{n} \frac{p_{i}}{C_{Fi}}}$$
(3)

(2)

where

 N_i = number of fish in length group i A = area (naut.miles²) of fish concentration S_A = mean integrator value in area (A) p_i = proportion of fish in length group i in samples from the area C_{Fi} = fish conversion factor for length group i

The number per length group (N_i) was then summed and the total number of fish obtained:

$$N = \sum_{i=1}^{n} N_i \tag{4}$$

The biomass of fish per length group (B_i) was calculated by applying observed mean weights per length group (W_i) multiplied by number of fish in the same length groups (N_i) . The total biomass in each area was obtained by summing the biomass of each length group:

$$B = \sum_{i=0}^{n} N_i \overline{W}_i$$
 (5)

The number and biomass per length group in each concentration were at last summed to obtain the total for each region.

The mean integrator values in each sampling unit (S_A -values) were divided between the following categories of fish on the basis of trawl catches and characteristics of the echo traces:

- sardinella (S. aurita and S. maderensis)
- sardine
- Cunene horse mackerel
- anchovies
- P2 (carangids, scombrids, barracudas and hairtails)
- Brachydeuterus
- other demersal fish
- plankton

2.1 INSTRUMENTS AND METHODS

Continuous profiles of temperature, salinity and oxygen were obtained with a Seabird 911 CTD Plus system. The data were logged in real time on a PC on board, using the Seabird SEASAVE software. As a routine the profiles were taken down to a few meters above the bottom. Two NISKIN bottles were triggered for water samples. These were usually taken near the bottom and near the surface (typically at 3m depth), and samples were taken for analysis of oxygen and salinity. The oxygen content was analyzed on board within a few days after the collection by the Winkler method.

Salinity calibrations could not be run on board because the salinometer was not functioning.

Results from the oxygen calibration are shown in Figure 2 after removing obvious outliers. It is a linear relationship between the Winkler titrated and the CTD results, indicating that the CTD values are too low. The oxygen values obtained with the CTD should be corrected according to the formula:

$$O_2 = O_{2CTD} * 1.193 + 0.189$$

When this formula was applied we obtained a standard error between titrated and CTD values of 0.17 using 241 accepted values. (NB!. The original CTD-data on .CNV files still have the 'old' values, i.e. these should be recalculated according to the formula above. One should also consider to change the calibration constants in the Seabird DATCNV program accordingly.)

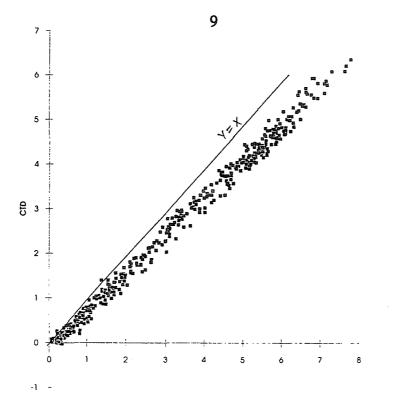


Figure 2 Comparison of oxygen obtained with the CTD versus the Winkler - titrated values.

2.2 RESULTS

Horizontal distribution maps

The surface (5m depth) temperature distribution between Benguela and Luanda is shown in Fig. 3a and between Luanda and Cabinda in Fig. 3b. The corresponding salinity distribution is shown in Fig. 4a and 4b. The surface water is warm, according to the season, and the isotherms run more or less parallel to the coast, indicating that the north-south variation of the temperature is much less that the cross shelf variation. The near shore zone is the coldest, and at some places the difference is up to 5°C. This indicates that water mixing takes place in these zones, probably due to the presence of winds or to tidal currents.

The salinity variation (Fig.4) is a lot more confusing. As the density in the region is dominated by the temperature, the salinity may almost be regarded as a neutral tracer. The Congo River water is readily seen some distance from the shore and water below 35 psu may be observed as far south as Pta de Palmeirinhas. Just outside the Congo River mouth the low salinity water seems to split into two branches, one heading South-West, and the main branch heading North-West.

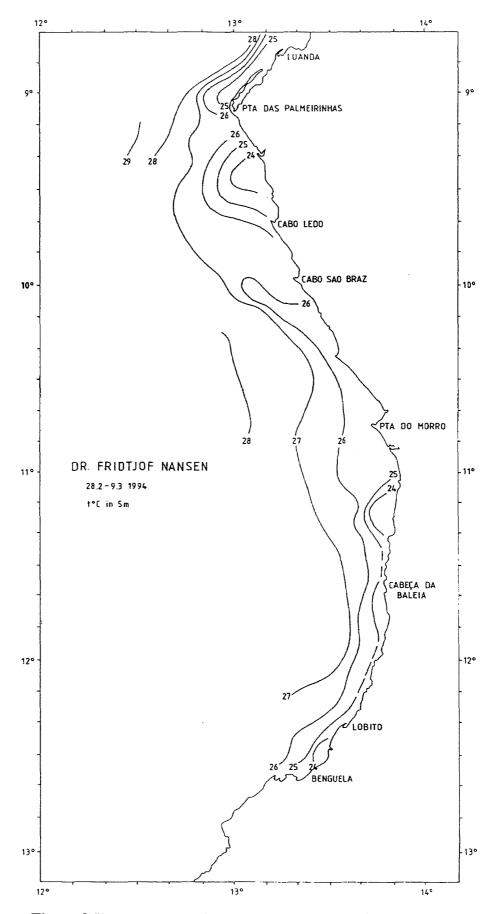


Figure 3 Horizontal distribution of temperature: a) Benguela-Luanda, and b) Luanda-Cabinda.

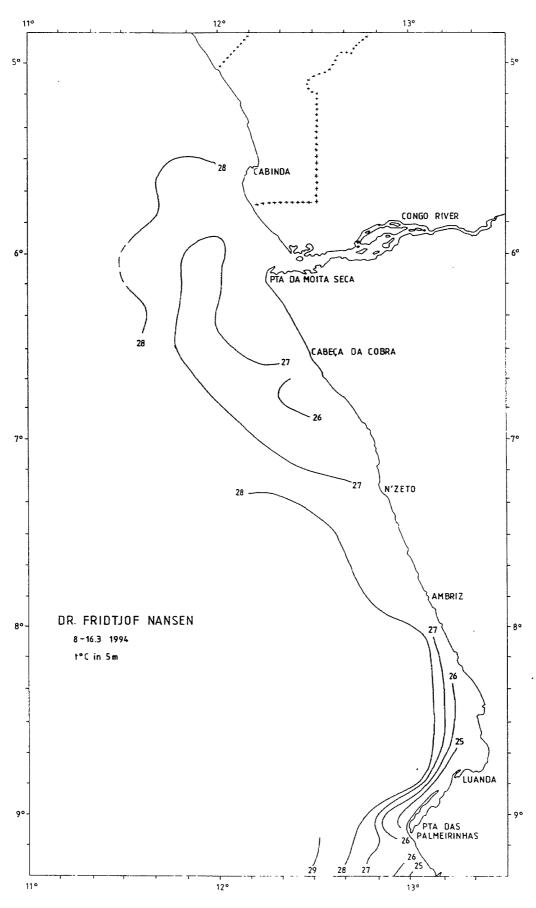


Figure 3b

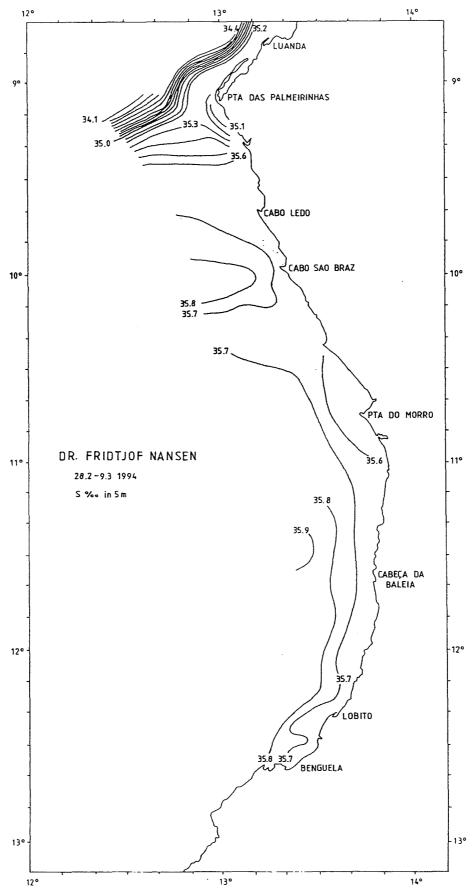


Figure 4 Horizontal distribution of salinity: a) Benguela-Luanda, and b) Luanda-Cabinda.

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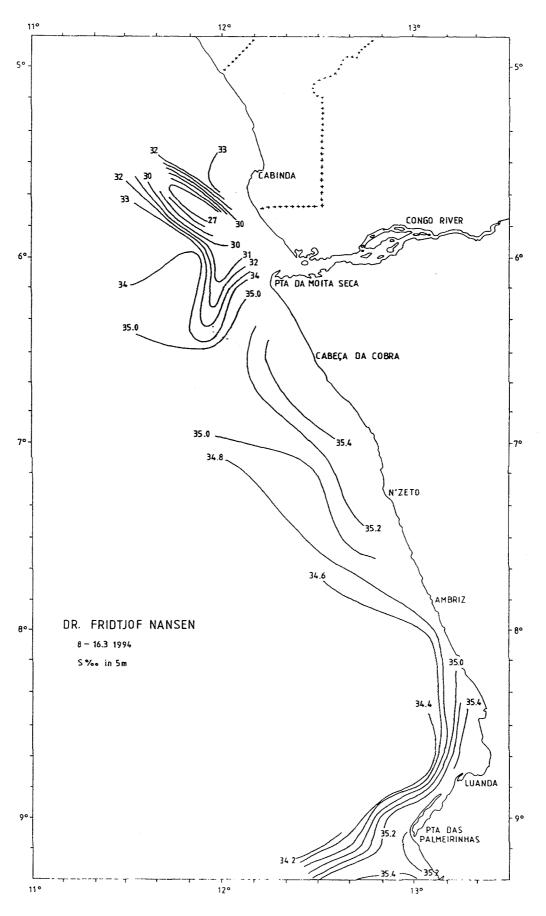


Figure 4b

Vertical sections

A section was made running W-NW outside Lobito, and in Fig.5 shows the vertical distribution of a) temperature, b) salinity and c) dissolved oxygen. Corresponding sections are displayed for Pta do Morro (Fig.6), Pta das Palmeirinhas (Fig.7), Ambriz (Fig.8) and across the Congo River Canyon (Fig.9). A strong thermocline is usually found at about 30 m depth. Fig.10 shows the upper part of the profiles at st 165 in the Lobito section. The slight rise of the isotherms towards the coast, observed in all sections except the Congo River, indicates mixing with colder subsurface water.

In the southernmost section (Lobito, Fig. 5) an oxygen maximum layer is evident at about 30 m, just below the thermocline, see Fig.10. Going northwards this oxygen maximum gradually disappears, while a salinity maximum layer develops. This salinity maximum is seen as far south as the Pta de Morro section (Fig 6b), but not in the Lobito section (Fig. 5b). The disappearance of the salinity maximum in the Lobito section is demonstrated in Fig. 11, where the T-S diagram of st. 165 in the Lobito section with st. 215 in the Ambriz section are presented for comparison. The maximum salinity is usually found at about 50 m depth and its core values increase northwards, becoming more than 36 psu in the Congo River section.

On-the-job training

Three oceanographers from IIP participated in the daily routines of oceanographic sampling, using the SEABIRD CTD system. They were also trained in analyzing oxygen using the Winkler method. Furthermore, they participated in drawing the sections and were trained in using PCs for data analyses.

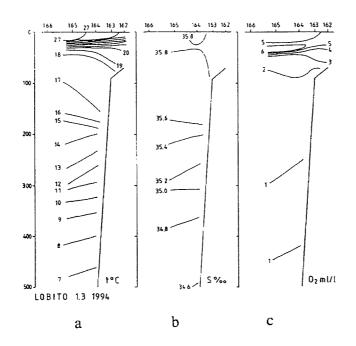


Figure 5 Vertical sections of a) temperature, b) salinity and c) oxygen. Lobito.

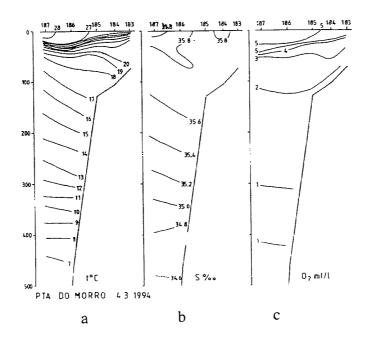


Figure 6 Vertical sections of a) temperature, b) salinity and c) oxygen. Pta do Morro.

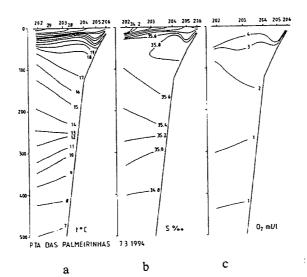


Figure 7 Vertical sections of a) temperature, b) salinity and c) oxygen. Pta das Palmeirinhas.

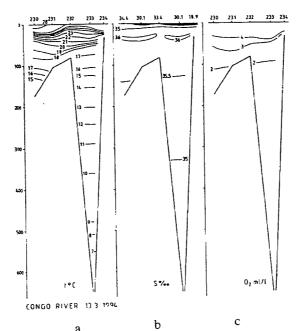


Figure 8 Vertical sections of a) temperature, b) salinity and c) oxygen. Ambriz.

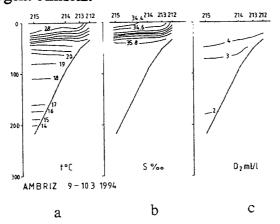


Figure 9 Vertical sections of a) temperature, b) salinity and c) oxygen. Congo River.

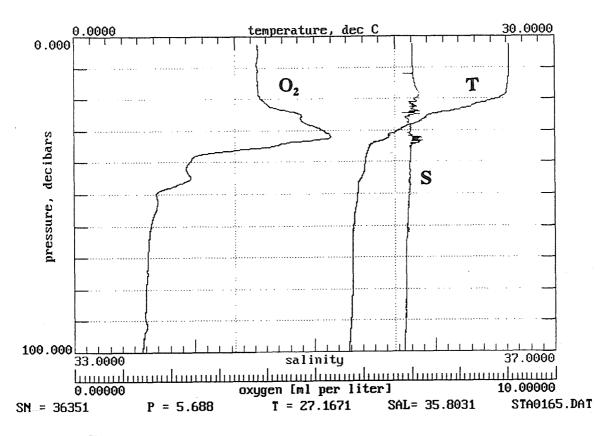


Figure 10. Vertical profiles temperature, salinity and oxygen at the upper 100 m of st. 165 in the Lobito section.

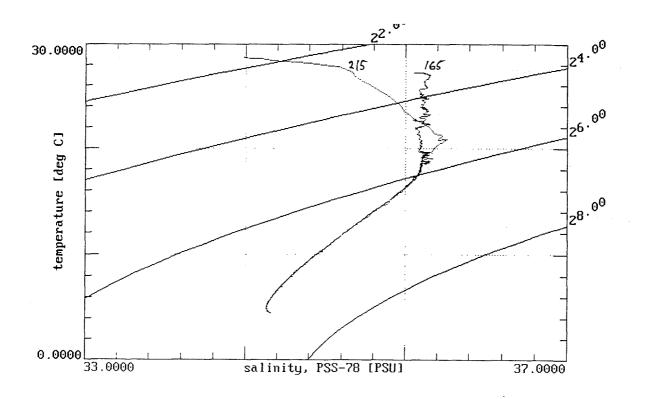


Figure 11. Temperature - salinity profiles of st. 165 and 215.

CHAPTER 3 DISTRIBUTION, COMPOSITION AND ABUNDANCE OF PELAGIC FISH

3.1 CABINDA - LUANDA

The depth range 25-200 m was surveyed almost throughout the area. Only between Ambriz and N'Zeto, where the inner shelf is rather narrow, the coverage was limited to approximately 80-200 m. Also, the coverage of the shallow waters (25-40 m) off Cabinda was somewhat limited because of oil extraction activities.

Sardinellas

Sardinella schools were detected only in two restricted areas (Figure 12), outside Cabeca da Cobra and in the bay north of Luanda. Both areas were surveyed thoroughly both day and night but only smaller concentrations were delineated. The bottom depth in the area where the sardinella schools were recorded was 50-70 m and the schools were, as usual, dense during daytime, dispersing and mixing with bottom dwelling fish lifting from the bottom during nighttime. Successful trawling was mainly done during the night, when the avoidance from the trawl was not severe. During daytime, the sardinella was almost impossible to catch, even with the largest pelagic trawl.

The length distributions show that large adults dominate for both species (Figure 13). In the case of S. maderensis there are however two modes (24 and 30 cm) while for S. aurita individual above 30 cm predominate.

The biomass in this area was estimated to about 100 000 t and the biological sampling shows that the proportions of flat and round sardinella were about 95 and 5 % respectively.

Cunene horse mackerel

No typical schools of Cunene horse mackerel were detected in this area. A few were caught by trawling outside N'Zeto (Figure 14). These few individuals did not in any significant way show up as schools during daytime. No estimate of the abundance was attempted for this region because of the very low level of S_A -values attributable to this group.

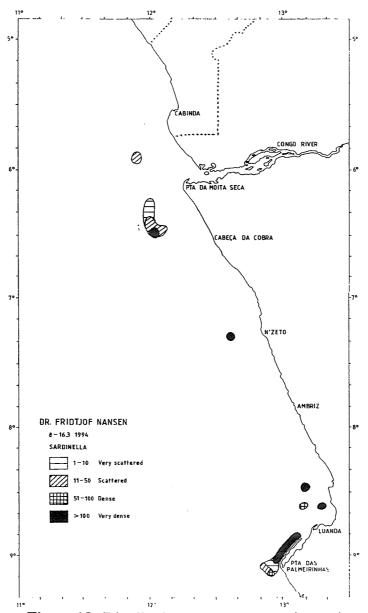


Figure 12. Distribution and abundance (tonnes) of sardinella, Cabinda-Luanda.

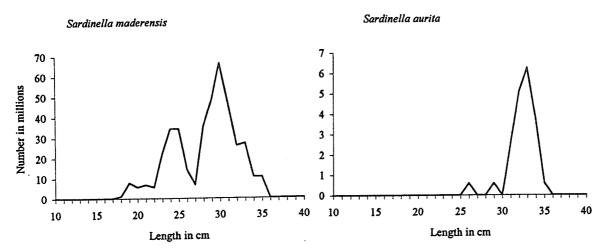
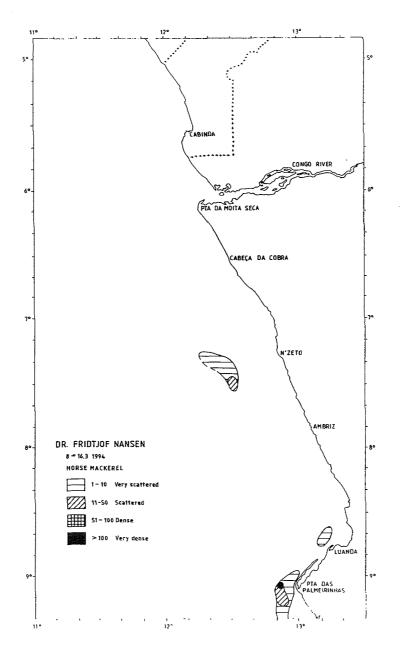
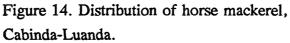


Figure 13. Total length distribution of sardinella, Cabinda-Luanda.





Pelagic fish type 2 (P2: carangids, scombrids, barracudas and hairtail)

These species were recorded in most of the surveyed area. However, the level of the S_A -values assigned to this group was very low and no estimate was made. This group consisted mainly of lookdown and hairtail.

3.2 LUANDA - BENGUELA

The area was surveyed thoroughly both at daytime and at night because of continuous registrations of pelagic fish. Close to shore, in waters shallower than 30 m, very scattered registrations of P2 type fish were detected. In areas with bottom depth around 55-65 m, sardinellas were often recorded in dense schools, usually close to the surface. Some distance further out from the coast and closer to the bottom, Cunene horse mackerel schools and schools of other fish of the P2 group were detected. Here the schools of P2 group fish consisted mainly of carangids. During the night the pattern changed in the way that the schools dispersed and the species mixed. Demersal fish lifted from the bottom and mixed with the pelagic species. The main concentrations of sardinellas were still found in bottom depths of 50 to 70 m.

Sardinellas

The sardinellas were distributed in several smaller areas as shown in Figure 15. Most sardinellas consisted of large, adult individuals for both species (Figure 16). Recruits (size 16-20 cm) were almost absent from the samples. Juvenile fish of sardinellas are often observed in inshore waters, close to the bottom and are therefore often difficult to catch and assess. For this reason this group is probably not well covered by our surveys. On the other hand the observed patterm seems to be consistent with the hypothesis that the main nursery areas are found off Congo and recruitment to the Angolan stocks takes place as a southward migration from Congolese waters. This is also confirmed by the high concentrations of juvenile sardinella found off Congo in the course of the same survey (see separate report).

Occasionally sardinella schools occurred very close to the surface during daytime. These schools were not recorded by the echosounder system and were therefore not measured and counted. However, if the number of schools spotted by eye and sonar was significant, these were sampled by trawling and included in the abundance estimation. This was done in the area outside Pta das Palmeirinhas where many schools were spotted but only very few were measured by the echosounder system.

The total biomass in this area was estimated to 410 000 t. The dominating species was the flat sardinella which in this area made up 80% of the catch in terms of weight.

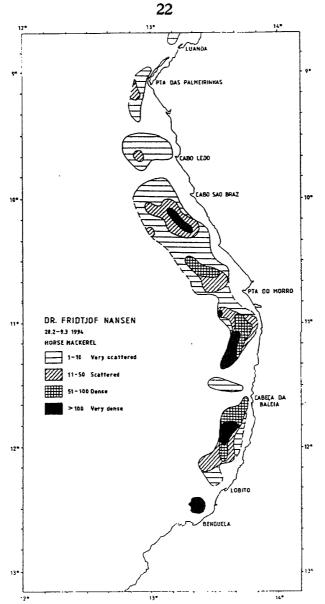


Figure 15. Distribution and abundance (1000 tonnes) of sardinella, Luanda-Benguela.

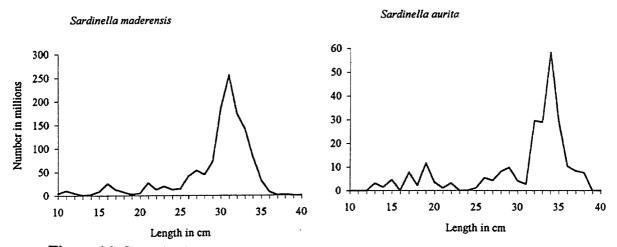
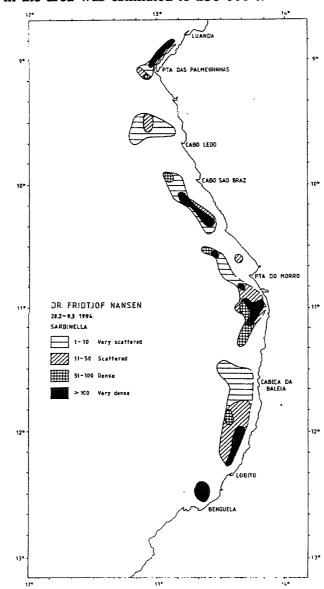


Figure 16. Length distributions of sardinellas, Luanda-Benguela.

Cunene horse mackerel

Figure 17 shows the distribution of Cunene horse mackerel in this area, forming a band in areas with bottom depth between 60 and 150 m. The densest concentrations were recorded in the southern part of the region, outside Benguela, between Benguela and Cabeca da Baleia and south of Pta do Morro. The highest abundance was estimated from south of Pta do Morro to Cabo sao Braz. Figure 18 shows the total length distribution weighted by numbers in the area. Three main cohorts are found, one with modal length at 15 cm, another with modal length at 27 and the third with modal length at 36 cm. The smallest individuals were the most abundant.



The total biomass in the area was estimated to 238 000 t.

Figure 17. Distribution of horse mackerel, Luanda-Benguela.

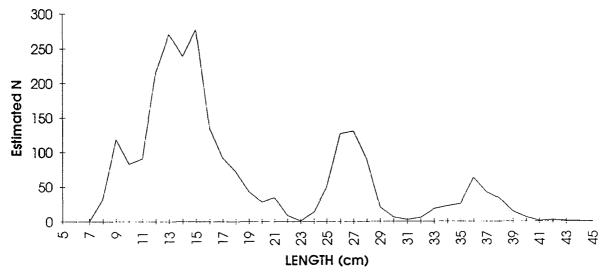


Figure 18. Total length distribution of horse mackerel, Luanda-Benguela.

Pelagic fish type 2 (P2: carangids, scombrids, barracudas and hairtail)

This group of fish was distributed from shallow waters to depths of 150-170 m. The carangids often aggregated in schools close to the bottom at depths around 70-80 m. The most dominating species were the hairtails, while the bumper (*Brachydeuterus auritus*) was the second most abundant in the catches. No separate acoustic estimate was carried out on this group of fish.

3.3 TOMBUA-CUNENE

This area was surveyed during the first 4 days of the cruise. No sardinellas were recorded and Cunene horse mackerel were caught in such low numbers that no biomass estimate was attempted. Estimates were made for the pilchard, the dominant species, and the anchovy.

Sardine

Concentrations of this species could not be analyzed in detail because of the limited time available. The biomass estimate, calculated to 223 000 t (Figure 19), might therefore suffer for insufficient sampling. The length frequency distribution in the samples (Fig. 20) shows two modes of about 20 and 25 cm.

Anchovy

Two main concentrations of anchovy were recorded, one outside the Peninsula dos Tigres and another north of Baia dos Tigres. The total biomass of the two was estimated to 30 000 t.

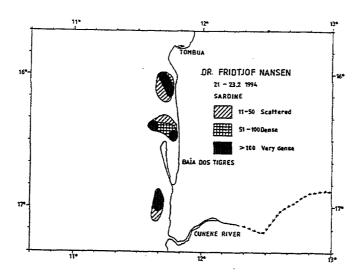


Figure 19. Distribution of sardine (pilchard), Tombua-Cunene.

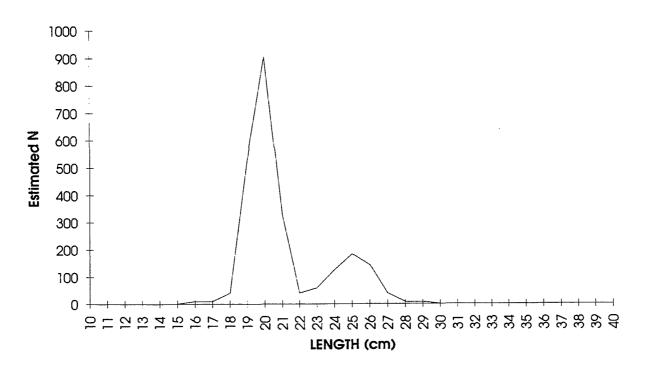


Figure 20. Total length distribution of sardine, Tombua-Cunene.

3.4 ON-THE-JOB TRAINING

All the Angolan biologists participated in sampling the catches (identification of species caught, counting, weighing and measuring) and were also responsible for entering the survey data using NAN-SIS.

Antonio Fontes, who has participated in a training course on the use of the EKO500 and the BEI system in Norway, often joined in the daily scrutinizing of the echograms as well as in the conversion of the acoustic output into biomass estimates.

CHAPTER 4 REVIEW OF THE RESULTS BY MAIN STOCKS

Sardine

Three dense school areas of sardine were delineated in the area around Baia dos Tigres. The total biomass estimate of 223 000 t is however based on a single coverage only. Table 1 shows the estimated biomass of sardine in the area since 1985.

ole 1 Estima	ates of sardi	ne in 1 000	tonnes.
Jan-Mar	Apr-Jun	Aug-Sep	Oct-Dec
25	0	120	10
50	0 10		5
	26 50	131 210	122
45 225	98		
	Jan-Mar 25 0 50 45	Jan-MarApr-Jun25000501026504598	25 0 120 0 120 0

The present estimate constitutes a record for this region, even more so considering that the season of highest occurrence of this species off southern Angola is usually in August-September, i.e. when upwelling is strongest in Angola and the frontal region of the Benguela Current reaches its northernmost limit. The survey of the RV 'Benguela' off northern Namibia, that took place a few days before the coverage off southern Angola, and carried out in collaboration with fishing vessels, could not detect any sardine in that region. It would therefore appear that the stock was concentrated further north, although this does not usually happens in this season.

Sardinellas

Sardinellas were found in relative high abundance in the area between Luanda and Benguela. The proportions of the flat and round sardinella were about 80 and 20 % respectively, for the whole shelf. The fish was found in areas with bottom depth at 55-65 m. In some areas the sardinellas occurred near surface. This was especially the case outside Pta das Palmeirinhas.

The total biomass estimate of 510 000 t obtained in the area from Cabinda to Benguela (Table 2) indicates a clear recovery of the stock as compared to 1992.

The observed distribution (with highest biomass in the central region) seems to confirm early hypotheses that sardinella stocks along the Angolan coast concentrate in its central part during the warm season and move northwards during the cold season (Anon., 1980). The dominance of large adults is consistent with the hypothesis that sardinellas recruit from Congo, where the main nursery area is located.

These patterns have been observed also in earlier 'Dr. Fridtjof Nansen' surveys and will be further investigated.

Table	e 2 Estimates of	biomass of sardir	nellas by regions	and surveys (1 00	0 tonnes)
Survey	Cunene- Benguela	Benguela- Luanda	Luanda- Cabinda	Benguela- Cabinda	TOTAL
1/85	25	220	80	300	325
2/85	110	190	180	370	480
3/85	0	70	190	260	260
4/85	0	200	110	310	310
1/86	10	140	110	250	260
2/86	10	130	130	260	270
1/89	40	200	60	260	300
2/89	20	40	130	170	190
3/89	40	100	60	160	200
1/91	+	180	120	300	300
2/91	+	68	154	222	222
1/92	+	119	161	280	280
1/94	-	410	100	510	500

Cunene horse mackerel

Cunene horse mackerel was found in rather high abundance only in the area between Luanda and Benguela (Table 3). The stock consists of a mixture of different cohorts and the younger individuals dominate. The area between Tombua and Cunene was surveyed only in its shallow part (within 15 to 20 naut. miles from the shore) and therefore the two species of horse mackerel occurring here were not properly covered.

Table	3 Estimates of	Cunene horse ma	ckerel by regions	and surveys (1 0()0 tonnes)
Survey	Cunene- Benguela	Benguela- Luanda	Luanda- Cabinda	Benguela- Cabinda	TOTAL
1/85	30	195	40	235	265
3/85	50	90	40	130	180
4/851/86	100	125	20	145	245
1/89	35	55	40	95	130
3/89	170	40	35	75	245
1/91	100	80	20	100	200
2/91	100	70	30	100	200
1/92	98	86	80	166	264
1/94	*	335	1	336	336

* not surveyed

Literature cited:

(Anon., 1980). Report on the *ad hoc* working group on *Sardinella* stocks from Congo to southern Angola (20-24 August 1979). CECAF INT/79/019

ANNEX I Records of fishing stations

DATE: 22/ 2/94 GEAR TY	PE: PT No:7	PROJI	ECT STATION DN:Lat S	: 1 1702
start stop duration TIME :03:01:00 03:20:00 19 (min			Long E	1136
LOG :3647.10 3648.30 1.20	Area code	:		
FDEPTH: 25 25 BDEPTH: 80 88	GearCond.c Validity c	ode: 3		
Towing dir: 270° Wire out:	100 m Speed	: 38 kn*	10	
Sorted: 18 Kg Total catch:	72.60	CATCH/I	HOUR: 22	9.26
SPECIES	CATCH/HOU		OF TOT. C	SAMP
Engraulis encrasicolus	228.63 1	bers 1975	99.73	1
Trachurus trecae Dicologoglossa cuneata	0.38 0.25	13 13	0.17 0.11	
Total	229.26		100.01	
DAME: 22 / 2 /04	PE: PT No:7		ECT STATION ON:Lat S	
start stop duration			Long E	1142
TIME :07:50:00 08:20:00 30 (mir LOG :3689.70 3691.10 1.40	Area code	:		
FDEPTH: 10 10 BDEPTH: 15 20	GearCond.c Validity o			
	150 m Speed		*10	
Sorted: 29 Kg Total catch:	4000.00	CATCH/	HOUR: 800	0.00
SPECIES	CATCH/HOL weight num	JR 🚺	OF TOT. C	SAMP
Engraulis encrasicolus Trachurus capensis		3888 94504	68.79 17.79	3
Trachurus capensis Sardinops ocellata	639.12	8194	7.99	2
Etrumeus whiteheadi Trachurus trecae	284.06 1 150.22	L0378 8468	3.55	4 6
Total	8000.00		100.00	
DATE: 22/ 2/94 GEAR TY	PE: PT No:7	PROJ	ECT STATION	1622
start stop duration TIME :19:45:00 20:15:00 30 (min) Purpose co	ode: 1	Long E	1146
LOG :3812.00 3813.50 1.50 FDEPTH: 10 10	Area code GearCond.	:		
BDEPTH: 17 15	Validity (code :	- 1 6	
-	150 m Speed			
Sorted: 17 Kg Total catch:	17.50	CATCH/	'HOUR:	35,00
SPECIES	CATCH/HO	UR 1	OF TOT. C	SAMP
Sardinops ocellata	weight nu	mbers 132	54.57	7
Sardinops ocellata Trachurus trecae		mbers 132 222	54.57 45.43	7 8
Sardinops ocellata Trachurus trecae - Total -	weight nu 19.10	132		
Trachurus trecae	weight nu 19.10 15.90	132	45.43	
Trachurus trecae	weight nu 19.10 15.90	132	45.43	
Trachurus trecae — Total —	weight nu 19.10 15.90 35.00	132 222 PROJ	45.43 100.00	8 N: 4
Trachurus trecae — Total — DATE:28/2/94 GEAR T start stop duration	weight num 19.10 15.90 35.00	132 222 PROJ POSITI	45.43	8 N: 4 1234
Trachurus trecae Total	weight nu 19.10 15.90 35.00 XPE: PT No:1 a) Purpose C Area code	132 222 PROJ POSITI ode: 1 : 2	45.43 100.00	8 N: 4 1234
Trachurus trecae Total - DATE:28/ 2/94 GEAR T Start stop duration TIME :14:40:00 15:03:00 23 (mi)	weight nu 19.10 15.90 35.00 XPE: PT No:1 n) Purpose C Area code GearCond.	132 222 PROJ POSITI ode: 1 : 2 code:	45.43 100.00	8 N: 4 1234
Trachurus trecae Total	weight nu 19.10 15.90 35.00 XPE: PT No:1 a) Purpose C Area code	132 222 PROJ POSITI ode: 1 : 2 code: code:	45.43 100.00 VECT STATIO (ON:Lat S Long E	8 N: 4 1234
Trachurus trecae Total	weight nu 19.10 15.90 35.00 XPE: PT No:1 n) Purpose C Area code GearCond. Validity :150 m Speed	132 222 PROJ POSITI ode: 1 code: 2 code: code: d: 39 km	45.43 100.00 VECT STATION ION:Lat S Long E	8 N: 4 1234
Trachurus trecae Total DATE:28/2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.00 15.00 FDEPTH: 20 20 BDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch	<pre>weight nu 19.10 15.90 35.00 35.00 xPE: PT No:1 n) Purpose co Area code GearCond, validity 150 m Speet : 119.93</pre>	132 222 PROJ POSITI ode: 1 : 2 code: code: code: d: 39 kr. CATCH,	45.43 100.00 VECT STATION ION:Lat S Long E 10 (HOUR: 3	8 N: 4 1234 1223 12.86
Trachurus trecae Total	<pre>weight nu 19:10 15:90 35:00 XPE: PT No:1 a) Purpose c Area code GearCond. Validity : 150 m Speet : 119.93 CATCH/MO weight nu</pre>	132 222 PROJ POSITJ ode: 1 : 2 code: 2 code: catcH, CATCH, UR \$	45.43 100.00 JECT STATION ION:Lat S Long E	8 N: 4 1234 1223
Trachurus trecae Total DATE: 28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus	<pre>weight nuu 19.10 15.90 35.00 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity 15.0 m Speet : 119.93 CATCH/HO weight nu 118.96</pre>	132 222 POSITI ode: 1 code: 2 code: d: 39 kr CATCH, UR UR 97	45.43 100.00 VECT STATION ION:Lat S Long E 4*10 (HOUR: 3 OF TOT. C 38.02	8 N: 4 1234 1223 12.86 SAMP 13
Trachurus trecae Total DATE: 28/ 2/94 GEAR T start stop duration TIME : 14:40:00 15:03:00 23 (min LOG : 4:666.60 4:668.10 1.50 PDEPTH: 20 20 BDEPTH: 20 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus	<pre>weight nuu 19:10 15:90 35.00 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity 15:0 m Speet : 119.93 CATCH/H0 weight nu 118.96 79.96 64.15</pre>	132 222 POSITI ode: 1 : 2 code: code: d: 39 km CATCH, UR Whers 97 39 180	45.43 100.00 TECT STATION ION:Lat S Long E 10 (HOUR: 3 OF TOT. C 38.02 25.56 20.50	8 N: 4 1234 1223 12.86 SAMP 13 12 11
Trachurus trecae Total	<pre>weight nu 19:10 15:90 35:00 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 150 m Speet : 119.93 CATCH/HO weight nu 118.96 79.96</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: d: 39 kn CATCH, UR 97 39	45.43 100.00 TECT STATION ION:Lat S Long E 10 (HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 3.82	8 1234 1223 12.86 SAMP 13 12
Trachurus trecae Total	<pre>weight nu 19:10 15:90 35:00 35:00 2PE: PT No:1 n) Purpose c Area code GearCond. Validity :150 m Speet : 119.93 CATCH/HO weight nu 118.96 79.96 64.15 26.09 11.95 4.64</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: d: 39 km cATCH, UR \$ 97 39 180 73 63 8	45.43 100.00 VECT STATIO ION.Lat S Long E 4*10 VHOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 3.82 1.48	8 1234 1223 12.86 SAMP 13 12 11 19
Trachurus trecae Total DATE: 28/ 2/94 GEAR T start stop duration TIME : 14:40:00 15:03:00 23 (min LOG : 4:466.60 4:668.10 1.50 PDEPTH: 28 45 DDEPTH: 28 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda	<pre>weight nu 19:10 15:90 35:00 35:00 200 200 200 200 200 200 200 200 200</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: 39 kr CATCH, mbers 97 39 180 73 73 63 8 3 5	45.43 100.00 VECT STATIO ION.Lat S Long E 4*10 VHOUR: 3 OF TOT. C 38.02 25.50 8.34 3.82 1.48 1.08 0.81	8 1234 1223 12.86 SAMP 13 12 11 19
Trachurus trecae Total	<pre>weight nu 19:10 15:90 35:00 35:00 XPE: PT No:1 n) Purpose c Area code GearCond. Validity 15:0 m Speet : 119.93 CATCH/HO weight nu 118:96 66:15 26:09 11:95 4.64 3.39 2.53 1.20</pre>	132 222 POSITI ode: 1 : 2 code: 1 code: d: 39 kr CATCH, UR Mbers 97 39 180 73 98 63 63 8 3	45.43 100.00 VECT STATIO ION:LAL S Long E 4*10 /HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 3.82 1.48 1.08 0.81 0.38	8 1234 1223 12.86 SAMP 13 12 11 19
Trachurus trecae Total DATE: 28/ 2/94 GEAR T start stop duration TIME : 14:40:00 15:03:00 23 (min LOG : 4:466.60 4:668.10 1.50 PDEPTH: 28 45 DDEPTH: 28 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda	<pre>weight nu 19:10 15:90 35:00 35:00 200 200 200 200 200 200 200 200 200</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: 39 kr CATCH, mbers 97 39 180 73 73 63 8 3 5	45.43 100.00 VECT STATIO ION.Lat S Long E 4*10 VHOUR: 3 OF TOT. C 38.02 25.50 8.34 3.82 1.48 1.08 0.81	8 1234 1223 12.86 SAMP 13 12 11 19
Trachurus trecae Total	<pre>weight nu 19:10 15:90 35:00 35:00 XPE: PT No:1 n) Purpose c Area code GearCond. Validity 15:0 m Speet : 119.93 CATCH/HO weight nu 118:96 66:15 26:09 11:95 4.64 3.39 2.53 1.20</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: 39 kr CATCH, mbers 97 39 180 73 73 63 8 3 5	45.43 100.00 VECT STATIO ION:LAL S Long E 4*10 /HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 3.82 1.48 1.08 0.81 0.38	8 1234 1223 12.86 SAMP 13 12 11 19
Trachurus trecae Total	<pre>weight nu 19:10 15:90 35:00 35:00 XPE: PT No:1 n) Purpose c Area code GearCond. Validity 15:0 m Speet : 119.93 CATCH/HO weight nu 118:96 66:15 26:09 11:95 4.64 3.39 2.53 1.20</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: 39 kr CATCH, mbers 97 39 180 73 73 63 8 3 5	45.43 100.00 VECT STATIO ION:LAL S Long E 4*10 /HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 3.82 1.48 1.08 0.81 0.38	8 1234 1223 12.86 SAMP 13 12 11 19
Trachurus trecae Total DATE: 28/ 2/94 GEAR T start stop duration TIME : 14:40:00 15:03:00 23 (min LOG : 4666.60 4668.10 1.50 PDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sardinella maderensis Schloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total	<pre>weight nu 19:10 15:90 35:00 35:00 xpp: PT No:1 a) Purpose c Area code Gearcond. validity : 150 m Speet : 119.93 cArCCH/HO weight nu 118:96 79:96 54:15 26:05</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: d: 39 kr code: d: 39 kr d: 39 kr CATCH, UR CATCH, 39 180 73 63 8 8 3 5 3 3 9 PROJ PROJ PROJ POSITI	45.43 	8 N: 4 1234 1223 12.86 SAMP 13 12 11 9 10
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE:28/ 2/94 GEAR T	<pre>weight nu 19:10 15:90 35.00 XPE: PT No:1 a) Purpose c Area code GearCond. Validity : 150 m Speed Controll il:96 79:96 79:96 79:96 79:96 79:97 11:95 26:09 11:95 26:09 26</pre>	132 222 POSITI ode: 1 code: 2 code: d d: 39 kr CATCH, UR CATCH, UR 97 39 180 73 63 8 8 3 5 5 3 9 PRO, POSITI	45.43 100.00 IECT STATIO ION:Lat S Long E 4*10 /HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 1.48 0.61 0.38 99.99 JECT STATIO ION:Lat S	8 N: 4 1234 1223 12.86 SAMP 13 12 11 9 10
Trachurus trecae Total DATE: 28/ 2/94 GEAR T start stop duration TIME : 14:40:00 15:03:00 23 (min LOG : 4666.60 4668.10 1.50 PDEPTH: 20 20 BDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Buthynnus alletteratus Sarda sarda Trachinolus ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE: 28/ 2/94 GEAR T start stop duration TIME : 16:43:00 17:16:00 33 (min	<pre>weight nu 19:10 15:90 35.00 35.00 PUE: PT No:1 n) Purpose c Area code GearCond. validity : 150 m Speet : 119.93 CATCH/HO Weight nu 118.96 79.96 6.09 11.95 4.64 3.39 2.53 1.20 312.87 YPE: PT No:1 n) Purpose c</pre>	132 222 PROJ POSITI ode: 1 : 2 code: 2 code: 39 km CATCH, UR 97 39 180 73 6 3 5 5 3 3 9 73 6 3 5 5 3 3 9 73 6 8 3 5 5 3 3 0 73 6 8 3 5 5 5 5 5 3 0 73 6 8 3 5 5 5 5 3 0 73 6 8 3 5 5 5 5 7 7 7 8 7 7 8 7 7 7 7 8 7 7 7 7	45.43 100.00 FECT STATION ION:Lat S Long E 4*10 (HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 1.48 0.81 0.38 99.99 UECT STATION ION:Lat S	8 N: 4 1234 1223 12.86 SAMP 13 12 13 12 10 N: 5 1232
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE:28/ 2/94 GEAR T start stop duration TIME :16:43:00 17:16:00 33 (min LOG :4680.50 4682.40 1.90	<pre>weight nu 19:10 15:90 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity 150 m Speet : 119.93 CATCH/HO Weight nu 118.96 79.96 64.15 26.09 11.95 4.64 3.39 2.53 1.20 312.87 XPE: PT No:1 n) Purpose c Area code GearCond.</pre>	132 222 PROJ POSITJ ode: 1 : 2 code: 2 code: 2 code: 39 km CATCH, UR 97 39 180 73 6 8 35 5 3 3 9 73 6 8 35 5 3 3 10 0 PROJ PROJ PROJ PROJ CATCH, PROJ CATCH, SO 10 10 10 10 10 10 10 10 10 10 10 10 10	45.43 100.00 FECT STATION ION:Lat S Long E 4*10 (HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 1.48 0.81 0.38 99.99 UECT STATION ION:Lat S	8 N: 4 1234 1223 12.86 SAMP 13 12 13 12 10 N: 5 1232
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE:28/ 2/94 GEAR T start stop duration TIME :16:43:00 17:16:00 33 (min LOG :4680.50 4682.40 1.90	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 a) Purpose c Area code GearCond. validity : 150 m Speed : 119.93 CATCH/HO weight nu 118.96 4.15 26.09 11.95 4.64 3.39 2.53 1.20 XPE: PT No:1 n) Purpose c Area code GearCond. Validity YPE: PT No:1 n) Purpose c Area code GearCond. Validity</pre>	132 222 POSITI oode: 1 code: 2 code: 1 code: 2 code: 4 code: 1 code: 1 code: 1 code: 1 code: 1 code: 2 code: 1 code: 2 code: 1 code: 2 code: 2	45.43 	8 N: 4 1234 1223 12.86 SAMP 13 12 13 12 10 N: 5 1232
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus chrysurus Selene dorsalis Uraspls secunda Decapterus punctatus Sardinella aurita Total DATE:28/ 2/94 GEAR T start stop duration TIME :16:43:00 17:16:00 33 (min LOG :4680.50 4682.40 1.90 FDEPTH: 200 170 BDEPTH: 419 236	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 150 m Speed : 119.93 CATCH/HO weight nu 118.96 19.96 64.15 26.09 11.95 26.09 11.95 26.09 11.95 312.87 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 550 m Speed</pre>	132 222 POSITI oode: 1 code: 2 code: 1 code: 2 code: 2 code: 3 7 3 6 3 8 8 3 3 7 3 6 3 8 8 3 3 5 5 5 5 3 8 8 8 3 3 7 8 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 8 7 8	45.43 100.00 TECT STATIO ION:Lat S Long E 4*10 /HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 3.62 1.48 1.08 0.81 0.38 99.99 JECT STATIO ION:Lat S Long E 1.41 1.42 1.42 1.43 1.43 1.43 1.44 1.45	8 N: 4 1234 1223 12.86 SAMP 13 12 13 12 10 N: 5 1232
Trachurus trecae Total DATE: 28/ 2/94 GEAR T Start stop duration TIME : 14:40:00 15:03:00 23 (mi) LOG : 4:666.60 4:668.10 1.50 PDEPTH: 248 4:5 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinolus ovatus Sardinella mderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE: 28/ 2/94 GEAR T Start stop duration TIME : 16:43:00 17:16:00 33 (mi) LOG :: 4:600.50 4:602.40 1.90 PDEPTH: 210 170 BDEPTH: 210 170 BDEPTH: 419 236 Towing dir: 100* Wire out Sorted: 38 Kg Total catch	<pre>weight nu 19:10 15:90 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 150 m Speet : 119.93 CATCH/HO weight nu 118.96 79.96 64.15 26.09 11.95 4.64 3.39 2.53 1.20 312.87 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 55 m Speet : 619.79</pre>	132 222 POSITI ode: 1 : 2 code: code: code: code: d: 39 km CATCH, POSIT: code: 1 : 2 code: 1 : 2 code: 1 : 2 code: 1 : 2 code: d: 4 2 km	45.43 100.00 FECT STATION ION:Lat S Long E 10 (HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 1.08 0.38 99.99 JECT STATIO ION:Lat S Long E 1.48 0.38 99.99 JECT STATIO ION:Lat S Long E 1.48 0.38 1.48 0.38 1.48 0.38 1.48 0.38 1.48 0.38 1.48 1.08 1.48 1.09 1.12 1.	8 N: 4 1234 1223 12.86 SAMP 13 12 13 10 N: 5 1232 : 1315 26.89
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (min LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE:28/ 2/94 GEAR T start stop duration TIME :16:43:00 17:16:00 33 (min LOG :4680.50 4682.40 1.90 FDEPTH: 200 170 BDEPTH: 419 236 Towing dir: 100° Wire out	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 a) Purpose c Area code GearCond. validity : 150 m Speed: : 119.93 CATCCH/HO weight nu 118.96 79.96 64.15 26.09 11.95 4.64 3.39 2.53 1.20 312.87 XPE: PT No:1 m) Purpose c Area code GearCond. validity : 550 m Speet: : 619.79 CATCH/HO</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: 1 code: 2 code: 2 code: 3 9 r 3 9 r 3 9 r 3 8 8 3 5 3 3 PROJ CATCH, POSITI code: 1 code: 1 code: 1 code: 1 code: 1 code: 2 code: 3 r s r 3 r 3 r 3 r 3 r 3 r 3 r 3 r 5 code: 1 code:	45.43 100.00 TECT STATIO ION:Lat S Long E 4*10 /HOUR: 3 OF TOT. C 38.02 25.50 8.34 3.82 1.48 1.08 0.61 0.38 99.99 JECT STATIO ION:Lat S Long E 4*10	8 N: 4 123 12.86 SAMP 13 12 11 9 10 N: 5 1232 : 1315
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (mi) LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Total DATE:28/ 2/94 GEAR T start stop duration TIME :16:43:00 17:16:00 33 (mi) LOG :4660.05 4682.40 1.90 FDEPTH: 419 236 Towing dir: 100° Wire out Sorted: 38 Kg Total catch SPECIES MYCTOPHIDAE	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 a) Purpose c Area code GearCond. validity : 150 m Speed: : 119.93 CATCH/HO weight nu 118.96 1.95 26.09 11.95 26.09 11.95 26.09 11.95 26.09 11.95 312.87 XPE: PT No:1 m) Purpose c Area code GearCond. validity : 550 m Speet: : 619.79 CATCH/HO weight nu 112.87</pre>	132 222 PROJ POSITJ ode: 1 code: 1 code: 2 code: 2 code: 1 code: 39 kr CATCH, UR POSITJ code: 1 code: 1 code: 1 code: 1 code: 1 code: 2 code: 1 code: 2 code: 2 code: 2 code: 2 code: 2 code: 2 code: 1 code: 2 code: 2 code: 2 code: 2 code: 2 code: 1 code: 2 code:	45.43 	8 N: 4 1234 1223 12.86 SAMP 13 12 13 10 N: 5 1232 : 1315 26.89
Trachurus trecae Total DATE:28/ 2/94 GEAR T start stop duration TIME :14:40:00 15:03:00 23 (mi) LOG :4666.60 4668.10 1.50 FDEPTH: 20 20 BDEPTH: 48 45 Towing dir: 60° Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Trachinotus ovatus Sarda sarda Total DATE:28/ 2/94 GEAR T start stop duration TIME :16:43:00 17:16:00 33 (mi) LOG :4660.05 4682.40 1.90 FDEPTH: 419 236 Towing dir: 100° Wire out Sorted: 38 Kg Total catch SPECIES MYCTOPHIDAE Trichiurus lepturus Taractes rubescens	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 a) Purpose c Area code GearCond. validity : 150 m Speed: : 119.93 CATCH/HO weight nu 118.96 1.95 26.09 11.95 26.09 11.95 26.09 11.95 312.87 XPE: PT No:1 m) Purpose c Area code GearCond. validity : 550 m Speet: : 619.79 CATCH/HO weight nu 112.87</pre>	132 222 PROJ POSITI ode: 1 code: 2 code: 2 code: 2 code: 39 kr CATCH, uR POSITI 39 7 39 8 3 5 3 3 8 8 3 5 3 3 9 7 3 7 3	45.43 	8 N: 4 1234 1223 12.86 SAMP 13 12 13 10 N: 5 1232 : 1315 26.89
Trachurus trecae Total DATE: 28/ 2/94 GEAR T Start stop duration TIME : 14:40:00 15:03:00 23 (mi) LOG :: 4666.60 4668.10 1.50 PDEPTH: 48 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Duthynnus alletteratus Sarda sarda Trachinolus ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE: 28/ 2/94 GEAR T Total DATE: 28/ 2/94 GEAR T SPECIES DATE: 28/ 2/94 GEAR T Sorted: 120 Kg Total catch SPECIES Sardinella aurita Total DATE: 28/ 2/94 GEAR T Sorted: 38 Kg Total catch SPECIES MYCTOPHIDAE Trichiurus lepturus	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 150 m Speet : 119.93 CATCH/HO weight nu 118.96 79.96 64.15 26.09 11.95 4.64 3.39 2.53 1.20 312.87 XPE: PT No:1 n) Purpose C Area code GearCond. validity : 550 m Speet : 619.79 CATCH/HO weight nu 1073.45 7 28.80</pre>	132 222 POSITI ode: 1 : 2 code: code: code: code: d: 39 kn CATCH, UR POSIT: sode: 1 : 2 code: d: 42 kn CATCH, UR CATCH, UR UR CATCH, UR CATCH, UR CATCH, UR CATCH, S178	45.43 100.00 FECT STATION ION:Lat S Long E 10 (HOUR: 3 OF TOT. C 38.02 25.56 20.50 8.34 1.08 0.38 99.99 JECT STATIO ION:Lat S Long E 1.46 0.81 0.38 99.99 JECT STATIO ION:Lat S Long E 1.47 1.48 1.58 1.48 1.	8 N: 4 1234 1223 12.86 SAMP 13 12 13 10 N: 5 1232 : 1315 26.89
Trachurus trecae Total DATE:28/ 2/94 GEAR T Start stop duration TIME :14:40:00 15:03:00 23 (mi) LOG :4:666.60 4668.10 1.50 PDEPTH: 48 45 Towing dir: 60* Wire out Sorted: 120 Kg Total catch SPECIES Euthynnus alletteratus Sarda sarda Trachinous ovatus Sardinella maderensis Chloroscombrus chrysurus Selene dorsalis Uraspis secunda Decapterus punctatus Sardinella aurita Total DATE:28/ 2/94 GEAR T Total DATE:28/ 2/94 GEAR T SPECIES DATE:28/ 2/94 GEAR T Sorted: 38 Kg Total catch SPECIES MYCTOPHIDAE Trichiny dir: 100' Wire out Sorted: 38 Kg Total catch	<pre>weight nu 19.10 15.90 35.00 XPE: PT No:1 n) Purpose c Area code GearCond. validity : 150 m Speet : 119.93 CATCH/HO weight nu 118.96 79.96 64.15 26.09 11.95 4.64 3.39 2.53 1.20 XPE: PT No:1 n) Purpose C Area code GearCond. Validity : 550 m Speet : 619.79 CATCH/HO weight nu 1073.45 7 28.80 20.73 2.91</pre>	132 222 POSITI ode: 1 : 2 code: code: code: code: d: 39 kn CATCH, UR POSIT: sode: 1 : 2 code: 1 : 39 kn S : 3 : 3 : 3 : 5 : 3 : 5 : 1 : 2 : 2 : 2 : 2 : 2 : 2 : 2 : 2 : 2 : 2	45.43 100.00 FECT STATION ION:Lat S Long E 10 (HOUR: 3 OF TOT. C 38.02 25.56 0.81 0.38 99.99 JECT STATIO ION:Lat S Long E 1.48 0.81 0.95 99.99 JECT STATIO ION:Lat S Long E 1.40 0.81 0.95 0.81 0.82 1.46 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.82 1.46 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.82 1.46 0.81 0.81 0.81 0.82 1.46 0.81 0.81 0.82 1.46 0.81 0.82 1.46 0.81 0.82 1.46 0.81 0.82 1.46 0.81 0.82 1.46 0.81 0.82 1.46 0.81 0.82 1.46 0.82 1.46 0.82 1.46 0.82 1.46 0.82 1.46 0.82 1.46 0.82 1.46 0.82 0.82 1.46 0.82 0.26 0.2	8 N: 4 1234 1223 12.86 SAMP 13 12 13 10 N: 5 1232 : 1315 26.89

start stop duration TIME :20:00:00 20:30:00 30 (min LOG :4700:90 4702.80 1.90 FDEPTH: 10 10 BDEPTH: 62 80	PE: PT No:4) Purpose c Area code GearCond. Validity 200 m Speed	POSITI ode: 1 : 2 code: code:	ECT STATION DN:Lat S Long E	1230 1230 1322
Sorted: 119 Kg Total catch:	2383.40	CATCH/	HOUR: 476	6.80
SPECIES	CATCH/HO	UR 👣	OF TOT. C	SAMP
Trachurus trecae	2992.00	mbers 6706	62.77	14
Sardinella maderensis Scomber japonicus	1146.00 304.80	3480 360	24.04 6.39	15
Sardinella aurita Trichiurus lepturus	238.00 53.20	490 120	4.99	16
Trachurus trecae Pagellus bellottii	16.00 9.60 7.20	600 80 40	0.34 0.20 0.15	
Dentex macrophthalmus Total	4766.80	40	100.00	
TOLAL	4700.00		100.00	
DATE: 1/ 3/94 GEAR TY start stop duration TIME :02:36:00 02:48:00 12 (mn LOG :4747.60 4748.30 0.70 FOEPTH: 20 17	PE: PT No:1) Purpose c Area code GearCond.	POSITI	ECT STATION ON:Lat S Long E	
BDEPTH: 72 72	Validity 150 m Spee	code:	*10	
Sorted: 55 Kg Total catch:		CATCH/		50.30
SPECIES	CATCH/HC weight nu 1410.00	unbers 5510	OF TOT. C 65.57	SAMP 19
Sardinella maderensis Sardinella aurita Brachydeuterus auritus	386.25 150.40	1010 975	17.96	18 17
Trachyuus capensis Spondyliosoma cantharus	145.50 39.40	410 40	6.77 1.83	20
Trachinotus ovatus Trichiurus lepturus	14.25 4.50	75 40	0.66	
Total —	2150.30		99.99	
start stop duration TIME : 14:04:00 14:48:00 44 (min LOG :4849.80 4852.70 2.90 FDEPTH: 31 30 EDEPTH: 66 49	Area code GearCond Validity 150 m Spee	POSIT code: 1 e : 2 .code: code: code: ed: 40 kr		1159
start stop duration TIME 14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch	h) Purpose o Area code GearCond Validity 150 m Spee : 47.99	POSIT code: 1 e : 2 .code: code: code: ed: 40 kr CATCH	ION:Lat S Long E n*10 /HOUR:	1159 : 1337 65.44
start stop duration TIME 14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch SPECIES	n) Purpose (Area codi GearCond Validity 150 m Spec : 47.99 CATCH/H weight n	POSIT: code: 1 e : 2 .code: code: ed: 40 kr CATCH OUR 1 umbers	ION:Lat S Long E h*10 /HOUR: OF TOT. C	1159 1337 65.44 SAMP
start stop duration TIME :14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sarda sarda	n) Purpose (Area cod GearCond Validity 150 m Spec : 47.99 CATCH/H	POSIT: code: 1 code: 2 code: code: ed: 40 kr CATCH	ION:Lat S Long E /HOUR: OF TOT. C 67.51 19.87 4.83	1159 1337 65.44 SAMP 21 22
start stop duration TIME 14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardánella aurita Sardá sarda Chloroscombrus chrysurus Sardinella madrensis	n) Purpose (Area codi GearCond Validity 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69	POSIT: code: 1 e : 2 .code: code: ed: 40 kr CATCH OUR 1 umbers 116 34 1 22 5	ION:Lat S Long E /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58	1159 1337 65.44 SAMP 21
start stop duration TIME 14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata	n) Purpose (Area codi GearCond Validity : 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29	POSIT: code: 1 e : 2 .code: code: ed: 40 kr CATCH OUR 1 umbers 116 34 1 22	ION:Lat S Long E /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 0.44	1159 1337 65.44 SAMP 21 22 24
start stop duration TIME 14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardánella aurita Sardá sarda Chloroscombrus chrysurus Sardinella madrensis	n) Purpose (Area codi GearCond Validity 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69	POSIT: code: 1 = : 2 2 .code: code: code: CATCH CATCH UUR 116 34 122 5 15	ION:Lat S Long E /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 0.44 	1159 : 1337 65.44 SAMP 21 22 24 23
start stop duration TIME 14:04:00 14:08:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127* Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T	n) Purpose (Area codi GearCond Validity : 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29	POSIT: code: 1 code: 2 code: 2 code: 40 kf cATCH OUR 1 16 34 1 22 5 15	JECT STATIC	1159 1337 65.44 SAMP 21 22 24 23 24 23 95 1150
start stop duration TIME 14:06:00 14:08:00 44 (min LOG :4849.80 4952.70 2.90 PDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127' wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sardinella maderensis Sepiella ornata Total	n) Purpose (Area codi GearCond Validity: 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44	POSIT: code: 1 = : 2 2 .code: code: code: code: code: code: lic code: 1 22 5 15	ION:LAT S Long E +*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 0.44 	1159 1337 65.44 SAMP 21 22 24 23 24 23 95 1150
DATE: 1/ 3/94 GEAR T Total DATE: 1/ 3/94 GEAR T Series Start stop duration TIME :19:30:00 20:15:00 45 (mi LOG :4892.20 4894.50 2.70	n) Purpose (Area codi GearCond Validity : 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond GearCond	POSIT: code: 1 = : 2 .code: code: code: code: code: 40 kr li6 34 1 22 5 5 15	ION:LAT S Long E +*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 0.44 	1159 1337 65.44 SAMP 21 22 24 23 24 23 95 1150
DATE: 1/ 3/94 Total Total DATE: 1/ 3/94 Total DATE: 1/ 3/94 Total	 n) Purpose (Area codi GearCond validity 150 m Species cATCH/H weight n 44.18 3.00 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond validity 250 m Species 	POSIT: code: 1 = 2 2 code: code: code: code: 16 34 16 34 1 22 5 15 15 PRO POSIT code: 1 e : 2 code: 1 e : 2 code: 1 e : 2 code: 1 code: 16 16 17 16 16 16 16 16 16 16 16 16 16 16 16 16	ION:Lat S Long E 1*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 4.83 4.77 2.50 4.83 4.77 2.50 4.83 4.77 2.50 100.00	1159 : 1337 65.44 SAMP 21 22 24 23 24 23 24 23 0N: 9 5 1150 5 1355
DATE: 1/ 3/94 GEAR T Total Total DATE: 1/ 3/94 GEAR T Total Total DATE: 1/ 3/94 GEAR T Total DATE: 1/ 3/94 GEAR T Sardinella aurita Sardinella aurita Sardinella aurita Sardinella aurita Sardinella aurita Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T Start stop duration TIME :19:30:00 20:15:00 45 (mi LOG :4892.20 4894.90 2.70 FDEPTH: 40 20 BDEPTH: 96 76	 n) Purpose (Area codi GearCond validity 150 m Species cATCH/H weight n 44.18 3.00 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond validity 250 m Species 	POSIT: code: 1 = 2 2 code: code: code: code: 16 34 16 34 1 22 5 15 15 PRO POSIT code: 1 e : 2 code: 1 e : 2 code: 1 e : 2 code: 1 code: 16 16 17 16 16 16 16 16 16 16 16 16 16 16 16 16	ION:Lat S Long E 1*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 4.83 4.77 2.50 4.83 4.77 2.50 4.83 4.77 2.50 100.00	1159 1337 65.44 SAMP 21 22 24 23 24 23 95 1150
DATE: 1/ 3/94 Total Total DATE: 1/ 3/94 Total DATE: 1/ 3/94 Total	 n) Purpose (Area codi GearCond Validity 150 m Species cATCH/H weight n 44.18 1.00 3.16 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond Validity : 250 m Spe : 920.10 	POSIT: code: 1 = 2 2 .code: code: code: code: 116 34 1 22 5 15 15 POSIT: code: 1 e 2 .code: 1 e 2 .code: 1 e 2 .code: 4 k CATCH	ION:Lat S Long E 1*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 4.83 4.77 2.50 4.83 4.77 2.50 4.83 4.77 2.50 100.00	1159 1337 65.44 SAMP 21 22 24 23 0N: 9 5 1150 5 1355 226.80
start stop duration TIME :14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127' Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T TIME :19:30:00 450 (min LOG :4892.20 4694.90 2.70 FDEPTH: 40 20 BDEPTH: 40 20 BDEPTH: 40 20 BDEPTH: 40 20 BDEPTH: 40 20 Sorted: 92 Kg Total catch SPECIES Trachurus trecae	 n) Purpose (Area cod GearCond Validity 150 m Species c 47.99 CATCH/H weight n 44.18 13.00 3.12 1.69 0.29 65.44 YPE: PT No:22 n) Purpose Area cod GearCond Validity : 250 m Species : 920.10 CATCH/H weight n 42.10 CATCH/H 	POSIT: code: 1 = 2 2 .code: code: code: code: code: 116 34 14 34 122 5 15 15 POSIT: code: 1 e : 2 .code: 1 e : 2 .code: 4 k CATCH COUR 1 .code: code:	ION:Lat S Long E +*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 0.44 	1159 1337 65.44 SAMP 21 22 24 23 24 23 25 1150 5 1150 226.80 SAMP 25
start stop duration TIME 14:04:00 14:08:00 44 (min LOG :4849.80 4052.70 2.90 in FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127 Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T start stop duration TIME :19:30:00 20:15:00 45 (min LOG :4092.20 4094.00 2.70 FDEPTH: 40 20 BDEPTH: 96 76 Towing dir: 120 Wire out Sorted: 92 Kg Total catch SPECIES Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Brachydeuterus auritus Sardinella maderensis	 n) Purpose of Area codi GearCond Validity: 150 m Spec 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose carCondy validity 250 m Spec : 920.10 CATCH/H weight n 822.00 175.33 110.00 60.27	POSIT: code: 1 = : 2 2 .code: code: code: code: 116 116 117 116 116 116 116 116	ION:Lat S Long E +*10 /HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 0.44 	1159 1337 65.44 SAMP 21 22 24 23 24 23 0N: 9 5 1150 5 1355 226.80 SAMP
start stop duration TIME 14:04:00 14:08:00 44 (min LOG :4849.80 4052.70 2.90 in FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127 Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T start stop duration TIME :19:30:00 20:15:00 45 (min LOG :4092.20 4094.00 2.70 FDEPTH: 40 20 BDEPTH: 96 76 Towing dir: 120 Wire out Sorted: 92 Kg Total catch SPECIES Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Brachydeuterus auritus Sardinella maderensis	n) Purpose of Area codi GearCond Validity: 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond Validity : 250 m Spec : 920.10 CATCH/H weight n 822.00 175.33 110.00 60.27 25.33 13.33	POSIT: code: 1 = : 2 2 .code: code: code: code: 116 116 34 122 5 15 PRO POSIT code: 1 e : 2 code: 1 e : 2 code: code: code: code: code: 1 code: 1 e : 2 code: code: code: code: code: code: code: code: code: code:	ION:Lat S Long E Long E (HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 0.44 100.00 JECT STATIC ION:Lat S Long E n*10 L/HOUR: 12 0.67 TOT. C 67.00 14.29 8.97 4.91 2.06 1.09	1159 1337 65.44 SAMP 21 22 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 23 24 24 25 24 24 25 24 24 25 24 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 22 24 23 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 24 24 25 24 24 25 24 25 24 24 24 25 24 25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
start stop duration TIME 14:04:00 14:08:00 44 (min LOG :4849.80 4052.70 2.90 in FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127 Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T start stop duration TIME :19:30:00 20:15:00 45 (min LOG :4892.20 4894.90 2.70 FDEPTH: 40 20 BDEPTH: 96 76 Towing dir: 120 Wire out Sorted: 92 Kg Total catch SPECIES Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Jrachydeuterus auritus Sardinella maderensis Scomber japonicus	n) Purpose of Area codi GearCond validity : 150 m Spec : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond Validity : 250 m Spe : 920.10 CATCH/H weight n 822.00 175.33 110.00 60.27 25.33 13.33 7.47 4.27	POSIT: code: 1 = : 2 code: code: code: d: 40 km life 34 1 1 22 5 15 15 00R 1 22 5 15 15 00R 1 22 5 15 15 00R 1 22 5 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 00R 1 22 25 15 15 15 15 15 15 15 15 15 15 15 15 15	ION:Lat S Long E Long E (HOUR: OF TOT. C 67.51 19.87 4.83 4.77 2.58 0.44 100.00 JECT STATIC ION:Lat S Long E n*10 V/HOUR: 12 0.67 TOT. C 67.00 14.29 8.97 2.06 1.09 0.61 0.61 0.61	1159 1337 65.44 SAMP 21 22 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 23 24 24 25 24 24 25 24 24 25 24 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 22 24 23 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 24 24 25 24 24 25 24 25 24 24 24 25 24 25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
start stop duration TIME 14:04:00 14:08:00 44 (min LOG :4849.80 4052.70 2.90 in FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127 Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T start stop duration TIME :19:30:00 20:15:00 45 (min LOG :4892.20 4894.90 2.70 FDEPTH: 40 20 BDEPTH: 40 20 BDEPTH: 95 76 Towing dir: 120 Wire out Sorted: 92 Kg Total catch SPECIES Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Jrachyus trecae juvenile Trichiurus lepturus Secomber japonicus Scomber japonicus Scomber japonicus	n) Purpose of Area codi GearCond Validity 150 m Species (A7.99) CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond Validity : 250 m Species : 920.10 CATCH/H weight n 822.00 175.33 110.00 60.27 25.33 13.33 7.47 4.27 3.60 3.33	POSIT: code: 1 = 2 2 code: code: code: code: d: 40 km life 34 12 25 15 15 15 00R 1 22 5 15 15 00R 1 22 code: 1 e : 2 2 5 15 15 00R 1 22 code: code: 16 25 15 00R 1 22 5 15 15 00R 1 16 34 0 00R 1 16 25 16 15 15 00R 1 16 25 15 15 00R 1 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 16 16 17 16 16 16 16 16 16 16 16 16 16 16 16 16	ION:Lat S Long E Long E (HOUR: OF TOT. C 67.51 19.87 2.58 0.44 100.00 JECT STATIC ION:Lat S Long I n*10 V/HOUR: 1: 0 OF TOT. C 67.00 14.29 8.97 2.06 1.09 0.61 0.25 0.27	1159 1337 65.44 SAMP 21 22 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 23 24 24 25 24 24 25 24 24 25 24 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 22 24 23 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 24 24 25 24 24 25 24 25 24 24 24 25 24 25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
start stop duration TIME 14:04:00 14:08:00 44 (min LOG :4849.80 4052.70 2.90 in FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127 Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T start stop duration TIME :19:30:00 20:15:00 45 (min LOG :4892.20 4894.90 2.70 FDEPTH: 40 20 BDEPTH: 96 76 Towing dir: 120 Wire out Sorted: 92 Kg Total catch SPECIES Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae Jrachyus trecae juvenile Trichiurus lepturus Scomber japonicus Scomber japonicus Scomber japonicus Scomber japonicus Sardinella arita Alloteuthis africana Bregmaceros sp.	n) Purpose of Area codi GearCond Validity : 150 m Spect : 47.99 CATCH/H weight n 44.18 13.00 3.16 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond Validity : 250 m Spect : 920.10 CATCH/H weight n 822.00 175.33 110.00 60.27 25.33 13.33 7.47 4.27 3.60 3.33 0.93 0.67	POSIT: code: 1 = : 2 .code: code: code: code: code: code: 116 34 122 5 15 15 16 34 22 5 15 15 22 5 15 22 5 15 22 5 15 22 5 15 22 5 15 22 5 15 25 16 22 5 15 25 16 25 16 22 5 15 25 15 25 16 25 25 25 16 25 25 15 25 25 15 25 25 25 25 25 25 25 25 25 2	ION:Lat S Long E Long E A*10 /HOUR: OF TOT. C 67.51 19.87 2.58 0.44 	1159 1337 65.44 SAMP 21 22 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 23 24 24 25 24 24 25 24 24 25 24 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 22 24 23 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 24 24 25 24 24 25 24 25 24 24 24 25 24 25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
start stop duration TIME 14:04:00 14:48:00 44 (min LOG :4849.80 4952.70 2.90 FDEPTH: 31 30 BDEPTH: 66 49 Towing dir: 127 Wire out: Sorted: 48 Kg Total catch SPECIES Trachinotus ovatus Sardinella aurita Sarda sarda Chloroscombrus chrysurus Sardinella maderensis Sepiella ornata Total DATE: 1/ 3/94 GEAR T Start stop duration TIME :19:30:00 20:15:00 45 (min LOG :4892.20 4894.90 2.70 FDEPTH: 40 76 Towing dir: 120* Wire out Sorted: 92 Kg Total catch SPECIES Trachurus trecae Brachydeuterus auritus Sardinella maderensis Trachurus trecae, juvenile Trichinus Lepturus Decapterus thonchus Scomber japonicus Sepiella ornata Saurida brasiliensis Sardinella maita Alloteuthis africana	n) Purpose of Area codi GearCond Validity 150 m Spect cATCH/H weight n 44.18 13.00 3.12 1.69 0.29 65.44 YPE: PT No:2 n) Purpose Area cod GearCond Validity : 250 m Spe : 920.10 CATCH/H weight n 44.18 1.69 0.29 	POSIT: code: 1 = 2 2 code: code: code: code: d: 40 ki life 34 12 22 5 15 15 00R 1 22 5 15 15 00R 1 22 code: code: code: code: code: code: 2 code: code: code: 1 5 15 16 16 22 5 15 15 15 15 15 15 15 15 15 15 15 15 1	ION:Lat S Long E Long E 1*10 /HOUR: OF TOT. C 67.51 19.87 2.58 4.77 2.58 0.44 	1159 1337 65.44 SAMP 21 22 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 24 23 24 24 24 23 24 24 24 23 24 24 23 24 24 23 24 24 24 23 24 24 23 24 24 25 24 24 25 24 24 25 24 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 22 24 23 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 25 24 24 25 24 25 24 24 24 25 24 24 25 24 25 24 24 24 25 24 25 24 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25

DATE: 2/ 3/94 CEAR T start stop duration TIME :02:00:00 02:15:00 15 (min LOG :4950.80 4951.70 0.90 FDEPTH: 25 25 BDEPTH: 75 71 Towing dir: 90* Wire out:	Area code GearCond. Validity	POSITIC code: 1 code: 2 code: code:	Long E	1158
Sorted: 51 Kg Total catch:	1242.63	CATCH/H	IOUR: 497	0.52
SPECIES Trachurus trecae Sardinella maderensis Brachydeuterus auritus Trichinrus lepturus Sepia officinalis hierredda Euthynnus alletteratus	3279.40 813.20 748.60 106.40 16.72 6.20	umbers 10560 3420 7144	DF TOT. C 65.98 16.36 15.06 2.14 0.34 0.12	SAMP 29 31 30
Total	4970.52		100.00	
DATE: 2/ 3/94 GEAR T Start stop duration	(PE: PT No:1	POSITIC	Long E	

	lare se								roud	5	133
TIME :05:	14:00 05:	33:00	19	(min) Purp	ose cod	e:	1			
LOG :497	7.10 497	9.30	2.2	0	Area	code	:	2			
FDEPTH:	20	20			Gear	Cond.co	de:				
BDEPTH:	.74	73			Vali	dity co	de :				
Tow	ing dir:	14-	Wire	out:	150 m			kn*1	0		
Sorted:	62 Kg	TO	tal	catch:	624	. 30	C & TT (сн/но	110.	107	1.47
oorteed					0.1		CAI		on.	197	1.4/
SPECIES										_	
SPECIES						CH/HOUR		4 01	TOT.	С	SAM
					weight						
Brachydeuterus					920.5		493		46.6		32
Trachurus tree					382.1		021		19.3		33
Sardinella mad	erensis				353.6	81	074		17.9	4	35
Sarda sarda					102.3	2	63		5.1	9	
Sardinella aur	ita				61.5	8	189		3.1	2	34
Trachurus trec	ae, juver	ile			55.8	92	526		2.8	3	36
Trichiurus lep	turus				47.0	5	126		2.3	9	
Selene dorsali					26.8		63		1.3		
Decapterus rho	nchus				16.4		32		0.8		
Sepiella ornat					5.0		347		0.2		
•					1971.4	-			99.9	-	

DATE: 2/ 3/94 GEAR T start stop duration TIME :09:00:00 09:35:00 35 (min LOG :5009.40 5012.30 2.90 FDEPTH: 20 20 BDEPTH: 64 48 Towing dir: 180* Wire out:	Area cod GearCond Validity	POSITI code: 1 e : 2 .code: code:	ECT STATION ON:Lat S Long E *10	4: 12 1206 1336
Sorted: 119 Kg Total catch	: 320.72	CATCH/	HOUR: 54	9.81
SPECIES	CATCH/H weight n	OUR % umbers	OF TOT. C	SAMP
Sardinella aurita	269.06	693	48.94	37
Sardinella maderensis	180.51	804	32.83	38
Trachinotus ovatus	75.43	197	13.72	39
Sarda sarda	16.54	7	3.01	
Chloroscombrus chrysurus	5.88	34	1.07	40
Sepiella sp.	1.15	65	0.21	40
Trichiurus lepturus	0.79		0.14	
Auxis thazard	0.45	2 2	0.08	
Total -	549.81		100.00	

		PROJ	ECT STATIO	N: 13
DATE: 2/ 3/94 GEAR T	YPE: PT No:2			1133
start stop duration			Long E	1340
TIME :19:40:00 20:10:00 30 (mi)	n) Purpose	code: 1	,	
LOG :5115.00 5116.00 1.90	Area cod			
FDEPTH: 10 10	GearCond	. code :		
BDEPTH: 25 37	Validity	code:		
Towing dir: 256° Wire out:	: 200 m Spe	ed: 36 kn	*10	
Sorted: 110 Kg Total catch	: 416.58	CATCH/	HOUR: 8	33.16
SPECIES	CATCH/H	1011D \$	ог тот. с	SAMP
		umbers	or 101. c	SMPIF
Brachydeuterus auritus	658.50	5340	79.04	43
Sardinella maderensis	33.30	120	4.00	42
Pagellus bellottii	22.26	60	2.67	46
Sphyraena guachancho	17.76	16	2.13	
Trichiurus lepturus	16.26	82	1.95	
Sphyraena sphyraena	15,66	46	1.88	
Sepia officinalis hierredda	13.04	8	1.57	
Chloroscombrus chrysurus	9.14	38	1.10	
Uraspis secunda	8.40	8	1.01	
Lagocephalus laevigatus	6.60	8	0.79	
Engraulis encrasicolus	6.36	1260	0.76	41
Pomadasys jubelini	5.40	8	0.65	
Lithognathus mormyrus	4.60	8	0.55	
Panulirus regius	3.80	2	0.46	
Alloteuthis africana	3.66	382	0.44	
Trachurus trecae, juvenile	3.20	390	0.38	
Decapterus rhonchus	2.84	8	0.34	
Ilisha africana	0.90	8	0.11	
Pagellus bellottii	0.82	232	0.10	
Boops boops	0.60	16	0.07	
Selene dorsalis	0.06	46	0.01	
Epigonus telescopus	0.00	8		
Total -	833.16		100.01	

DATE: 2/ 3/94 GEAR T start stop duration	PE: PT No:2	POSITION:	
TIME :23:35:00 23:55:00 20 (mi: LOG :5143.30 5145.20 1.90	n) Purpose co Area code	ode: 1	Long E 1339
FDEPTH: 10 10 BDEPTH: 62 47	GearCond.c Validity d	:ode :	
	200 m Speed	l: 3 kn*10	
Sorted: 23 Kg Total catch	: 503.84	CATCH/HOU	R: 1511.52
SPECIES	CATCH/HOL		TOT. C SAMP
Brachydeuterus auritus Trachurus trecae			59.78 44
Trachurus trecae, juvenile Trichiurus lepturus	151.68 60.48		18.74 43 10.03 45 4.00
Chloroscombrus chrysurus Sardinella aurita	48.72 21.84	264	3.22
Sphyraena guachancho Pagellus bellottii	19.20 17.04	24 96	1.44
Sepia officinalis hierredda Engraulis encrasicolus	2.64	24 384	1.13 0.17 0.11
Sepiella sp.	1.44	840	0.10
Total	1511.52		99.99
	YPE: PT No:2	POSITION:	
start stop duration TIME :02:32:00 03:02:00 30 (mi		ode: 1	Long E 1331
LOG :5170.40 5172.10 1.70 FDEPTH: 10 10	Area code GearCond.c	code :	
BDEPTH: 80 75 Towing dir: 360° Wire out	Validity o 200 m Speed	code: l: 3 kn*10	
Sorted: 60 Kg Total catch	: 241.45	CATCH/HOU	R: 482.90
SPECIES	CATCH/HOU	JR SOF	TOT. C SAMP
Brachydeuterus auritus	206.40		42.74 46
Selene dorsalis Trichiurus lepturus	180.00 58.40	272	37.27 12.09
Trachurus trecae, juvenile Sardinella maderensis	23.68 11.20	928 32	4.90 47 2.32
Sepiella ornata Chloroscombrus chrysurus	1.76 1.36	744 8	0.36 0.28
Total -	482.80		99.96
DATE: 3/ 3/94 GEAR T	YPE: PT No:6		STATION: 16 Lat S 1108
start stop duration TIME :13:04:00 13:36:00 32 (mi	n) Purpose co	ode: 1	Long E 1344
LOG :5267.30 5269.20 1.90 FDEPTH: 10 10	Area code GearCond.c	code :	
BDEPTH: 63 58 Towing dir: 350° Wire out	Validity o 200 m Speed	code: 1: 4 kn*10	
Sorted: Kg Total catch	: 4.42	CATCH/HOU	R: 8.29
SPECIES			
SPECIES	CATCH/HO		TOT. C SAMP
Auxis thazard	weight nur 5.04	nbers 11	60.80
Auxis thazard Sardinella maderensis Sepia officinalis hierredda	weight nur 5.04 1.69 1.03	nbers 11 6 99	60.80 20.39 12.42
Auxis thazard Sardinella maderensis	weight nur 5.04 1.69	nbers 11 6 99 4	60.80 20.39
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus	weight nur 5.04 1.69 1.03 0.53	nbers 11 6 99 4	60.80 20.39 12.42 6.39
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total -	weight nur 5.04 1.69 1.03 0.53 8.29	nbers 11 6 99 4 1 PROJECT	60.80 20.39 12.42 6.39 00.00 STATION: 17
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration	weight nur 5.04 1.69 1.03 0.53 8.29 8.29	nbers 11 6 99 4 1 PROJECT POSITION:	60.80 20.39 12.42 6.39 00.00 STATION: 17
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30	weight nur 5.04 1.69 1.03 0.53 8.29 8.29 YPE: PT No:1 n) Purpose ce Area code	nbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat s 1106
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121	weight nur 5.04 1.69 1.03 0.53 8.29 8.29 YPE: PT No:1	hbers 11 6 99 4 PROJECT POSITION: bde: 1 : 2 code: 2 code: 5 code: 5	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat s 1106
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121	<pre>weight nu 5.04 1.69 1.69 0.53 8.29 XPE: PT No:1 n) Purpose co Area code GearCond. Validity co validity co validito validity co valid</pre>	hbers 11 6 99 4 PROJECT POSITION: bde: 1 : 2 code: 2 code: 5 code: 5	60.80 20.39 12.42 6.39 000.00 STATION: 17 Lat S 1106 Long E 1336
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME 15:48:00 16:55:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEFTH: 90 70 BDEFTH: 135 121 Towing dir: 250* Wire out	weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. Validity of 15.60	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG ::5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES	weight nur 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose or Area code GearCond. Validity of 450 m Second. (450 m Second. CATCH/HOI weight nur	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5:288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 XPE: PT No:1 n) Purpose cr Area code GearCond. Validity (: 450 m Speec : 15.60 CATCH/HOU weight nu 7.06 4.01 2.62</pre>	nbers 11 6 9 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LGG :5288:20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 XPE: PT No:1 n) Purpose cr Area code GearCond. Validity (: 450 m Speec : 15.60 CATCH/HOU weight nu 7.06 4.01 2.62 0.08</pre>	nbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5:288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 XPE: PT No:1 n) Purpose cr Area code GearCond. Validity (: 450 m Speec : 15.60 CATCH/HOU weight nu 7.06 4.01 2.62</pre>	nbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LGG :5288:20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 XPE: PT No:1 n) Purpose cr Area code GearCond. Validity (: 450 m Speec : 15.60 CATCH/HOU weight nu 7.06 4.01 2.62 0.08</pre>	nbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292:50 4.30 FDEPTH: 90 270 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 XPE: PT No:1 n) Purpose cr Area code GearCond. Validity (: 450 m Speec : 15.60 CATCH/HOU weight nu 7.06 4.01 2.62 0.08</pre>	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:55:00 36 (mi	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. Validity (: 450 m Speec : 15.60 CATCH/HOI weight nu 7.06 0.08 13.77 XPE: PT No:6 n) Purpose co</pre>	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Toving dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314.40 2.10 FDEPTH: 0 0 BDEPTH: 54 65	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. validity (: 450 m Speec : 15.60 CATCH/HOI weight nu 2.62 0.08 13.77 XPE: PT No:6 n) Purpose co Area code GearCond.</pre>	nbers 11 6 99 4 1 PROJECT POSITION: ode: 1 : 2 ode: 2 i: 3 kn*10 CATCH/HOU IR & OF nbers 141 30 2 1 PROJECT POSITION: ode: 1 2 ode: 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:46:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314.40 2.10 FDEPTH: 0 0 BDEPTH: 54 65 Towing dir: 275* Wire out	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. validity co catcH/HOI weight nu 7.06 catcH/HOI weight nu 7.06 0.08 13.77 YPE: PT No:6 n) Purpose co Area code GearCond. validity co catcH/HOI 2.62 0.08 13.77</pre>	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Toving dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314.40 2.10 FDEPTH: 0 0 BDEPTH: 54 65	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. validity co catcH/HOI weight nu 7.06 catcH/HOI weight nu 7.06 0.08 13.77 YPE: PT No:6 n) Purpose co Area code GearCond. validity co catcH/HOI 2.62 0.08 13.77</pre>	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:46:00 16:56:00 68 (mi LOG :5288.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314.40 2.10 FDEPTH: 0 0 BDEPTH: 54 65 Towing dir: 275* Wire out	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. Validity ec 450 m Spect 15.60 CATCH/HOI 2.62 0.08 13.77 YPE: PT No:6 n) Purpose co Area code GearCond. Validity ec 15.60 CATCH/HOI 2.180 m Spect : 180 m Spect : 180 m Spect</pre>	nbers 11 6 99 4 1 PROJECT POSITION: Dde: 1 2 code: 2 1: 3 kn*10 CATCH/HOU CATCH/HOU CATCH/HOU	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288.20 5292.56 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314.40 2.10 FDEPTH: 54 65 Towing dir: 275* Wire out Sorted: 118 Kg Total catch SPECIES Brachydeuterus auritus Sardinella maderensis	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. Validity ec 450 m Spect 15.60 CATCH/HOI 2.62 0.08 13.77 YPE: PT No:6 n) Purpose co Area code GearCond. Validity ec 15.60 CATCH/HOI 2.180 m Spect : 180 m Spect : 180 m Spect</pre>	hbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345 R: 3153.60 TOT. C SAMP 30.78 5;
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME :15:48:00 16:56:00 68 (mi LOG :5288:20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314:40 2.10 FDEPTH: 0 0 BDEPTH: 54 65 Towing dir: 275* Wire out Sorted: 118 Kg Total catch SPECIES Brachydeuterus auritus Sardinella maderensis Trachurus trecae Chloroscombrus chrysurus	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. validity of : 450 m Speec : 15.60 CATCH/HOI weight nu 7.06 0.08 13.77 YPE: PT No:6 n) Purpose co Area code GearCond. validity of : 180 m Speec CATCH/HOI weight nu 970.67 642.67 642.67 517.33</pre>	nbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345 R: 3153.60 TOT. C SAMP 30.78 52 20.38 45 19.44 19.24 50
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 GEAR T start stop duration TIME 15:48:00 16:56:00 68 (mi LOG :5288:20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250* Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 GEAR T start stop duration TIME :19:23:00 19:59:00 36 (mi LOG :5312.30 5314:40 2.10 FDEPTH: 0 0 BDEPTH: 54 65 Towing dir: 275* Wire out Sorted: 118 Kg Total catch SPECIES Brachydeuterus auritus Sardinella maderensis Trachurus trecae Chloroscombrus chrysurus Sardinella matrita Trichiurus lepturus	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond. validity (: 450 m Speec : 15.60 CATCH/HOI weight nu 7.06 0.08 13.77 YPE: PT No:6 n) Purpose co Area code GearCond. validity (: 180 m Speec CATCH/HOI weight nu 970.67 642.67 642.67 517.33 208.80 202.67</pre>	mbers 11 6 99 4 	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345 R: 3153.60 TOT. C SAMP 30.78 52 20.38 45 19.44 19.24 50 16.40 51 6.43
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 CEAR T Start stop duration TIME :15:46:00 16:56:00 68 (mi LOC :2288.20 5292.50 4.30 PDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250' Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 CEAR T total DATE: 3/ 3/94 CEAR T Total DATE: 3/ 3/94 CEAR T Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 CEAR T Sorted: 118 Kg Total catch SPECIES Brachydeuterus auritus Sardinella maderensis Trachurus trecae Chloroscombrus chrysurus	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code CarCH/HOI weight nu 7.06 13.77 YPE: PT No:6 n) Purpose co CarCH/HOI weight nu 7.06 13.77 YPE: PT No:6 n) Purpose co CarCH/HOI weight nu 970.67 642.67 606.67 517.33 208.80</pre>	<pre>mbers ili 6 99 4</pre>	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345 R: 3153.60 TOT. C SAMP 30.78 55 20.38 45 19.24 55 19.24 55 19.25 19.
Auxis thazard Sardinella maderensis Sepia officinalis hierredda Chloroscombrus chrysurus Total DATE: 3/ 3/94 CEAR T start stop duration TIME :15:46:00 16:56:00 68 (mi LOG ::2286.20 5292.50 4.30 FDEPTH: 90 70 BDEPTH: 135 121 Towing dir: 250° Wire out Sorted: 16 Kg Total catch SPECIES Maurolicus muelleri Sepia officinalis hierredda Trichiurus lepturus Illex coindetii Total DATE: 3/ 3/94 CEAR T start stop duration TIME :19:21:0 stop duration TIME :19:21:0 stop duration TIME :19:21:0 stop 00 36 (mi LOG :5312.30 5314.40 2.10 FDEPTH: 0 0 BDEPTH: 54 65 Towing dir: 275° Wire out Sorted: 118 Kg Total catch SPECIES Brachydeuterus auritus Sardinella maderensis Trachurus trecae Chloroscombrus chrysurus Sardinella aurita Trichiurus lepturus Selene dorsalis	<pre>weight nu 5.04 1.69 1.03 0.53 8.29 YPE: PT No:1 n) Purpose co Area code GearCond.(Validity of t 450 m Speet : 15.60 CATCH/HOI weight nu 7.06 13.77 YPE: PT No:6 n) Purpose co GearCond.(validity of t 450 13.77 YPE: PT No:6 n) Purpose co GearCond.(validity of t 4.01 2.62 0.08 13.77 YPE: PT No:6 n) Purpose co GearCond.(validity of t 180 m Speet : 1892.16 CATCH/HOI weight nu 970.67 642.67 602.67 517.33 208.80 202.67 4.00</pre>	<pre>mbers 11 6 99 4 1 PROJECT POSITION: ode: 1 code: 1 code: 1 code: 1 code: 1 code: 1 1 1 code</pre>	60.80 20.39 12.42 6.39 00.00 STATION: 17 Lat S 1106 Long E 1336 R: 13.76 TOT. C SAMP 51.31 29.14 19.04 0.58 00.07 STATION: 18 Lat S 1102 Long E 1345 R: 3153.60 TOT. C SAMP 30.78 52 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 45 19.24 51 20.38 51 51 51 51 51 51 51 51 51 51

DATE: 3/ 3/94 GEAR TY	PE: PT No:2	PROJ POSITI	ECT STATION ON:Lat S	4: 19 1051
start stop duration TIME :23:33:00 00:03:00 30 (min)) Purpose		Long E	1340
LOG :5344.40 5345.90 1.50 FDEPTH: 10 10 BDEPTH: 51 57	Area coo GearCon Validity	i.code: / code:	•10	
Towing dir: 344* Wire out: Sorted: 70 Kg Total catch:	175.48			50.96
SPECIES	CATCH/I	HOUR	OF TOT. C	SAMP
Brachydeuterus auritus	147.26	numbers 1674	41.96	53
Gardinella maderensis Frichiurus lepturus	86.76 53.26	306 246	24.72 15.18	54
Trachurus trecae Chloroscombrus chrysurus	23.36 18.66	54 140	6,66 5,32	56
Sardinella aurita Sphyraena guachancho	14.96 4.70	116	4.26 1.34	55
epia officinalis hierredda Engraulis encrasicolus	1.50	16 140	0.43	
Total	350.96		100.01	
		PROT	ECT STATIO	N: 20
DATE: 4/ 3/94 GEAR TY start stop duration	PE: BT No:		ON:Lat S Long E	1035
TIME :13:54:00 14:24:00 30 (min LOG :5482,60 5484.10 1.50) Purpose Area co		•	
FDEPTH: 47 41 BDEPTH: 47 41	GearCon Validít	d.code:		
	200 m Spe	ed: 31 kn	*10	
Sorted: 120 Kg Total catch:	2529.03	CATCH/	HOUR: 50	58.06
SPECIES	CATCH/ weight		OF TOT. C	SAMP
Brachydeuterus auritus Trichiurus lepturus	2683.80 697.20	33344	53.06 13.78	57
Trichiurus lepturus Trachurus trecae Diorecombur, chrusurus	543.90 335.16	1512 1890	13.78 10.75 6.63	58
Chloroscombrus chrysurus Decapterus rhonchus Decalus ballottii	183.96	294 2318	6.63 3.64 2.45	60
?agellus bellottii Frachurus trecae, juvenile Spondyliosoma cantharus	123.90 107.10 106.26	3318 3236 84	2.45 2.12 2.10	60 59
Dentex barnardi	59.22	546	1.17	
Selene dorsalis Engraulis encrasicolus	59.22 46.20	252 6468	1.17 0.91	
Chaetodon hoefleri Pomadasys incisus	30.24 26.46	252 126	0.60	
Atractoscion aequidens Pseudupeneus prayensis	22.26 9.66	42 42	0.44	
Forpedo torpedo Sepiella sp.	9.24 8.40	42 3696	0.18 0.17	
Citharus linguatula Boops boops	5.04 0.84	126 42	0.10 0.02	
Total	5058.06		100.00	
DATE: 4/3/94 GEAR TY start stop duration TIME :20:20:00 20:53:00 33 (min LOG :5546.50 5548.10 1.60	PE: PT No:) Purpose Area co	2 POSITI	ECT STATIO ON:Lat S Long E	1028
FDEPTH: 5 5 BDEPTH: 99 101	GearCon Validit	d.code:		
Towing dir: 129* Wire out:	180 m Sp	eed: 3 km		
Sorted: 65 Kg Total catch:	589.41	САТСН,	HOUR: 10	71.65
SPECIES	CATCH/ weight	HOUR %	OF TOT. C	SAMP
Brachydeuterus auritus Trachurus trecze	700.36	6229 8933	65.35	62 61
Trachurus trecae Selene dorsalis	289.64 32.73	82	27.03 3.05 2.87	01
Trichiurus lepturus Saurida brasiliensis	30.76	49 3616	1.50	
Sepiella ornata Bregmaceros sp.	1.31 0.82	65 425	0.12	
	1071.66		100.00	
DATE: 4/ 3/94 GEAR TY start stop duration	PE: PT No:	PRO. 2 POSIT:	JECT STATIO ION:Lat S Long E	1019
TIME :23:15:00 23:45:00 30 (min LOG :5567.30 5568.90 1.60) Purpose Area co			
FDEPTH: 0 0	GearCon	d.code:		
	Validit 180 m Sp			
Sorted: 94 Kg Total catch:	660.59	CATCH,	HOUR: 13	21.18
SPECIES	CATCH/ weight	HOUR %	OF TOT. C	SAMP
Sphyraena guachancho	589.40	1288 71756	44.61	
Engraulis encrasicolus Trachurus trecae, juvenile	319.20 74.76	3152	24.16	63
Selene dorsalis Trichiurus lepturus	42.28 39.48	140 126	3.20 2.99	
Spondyliosoma cantharus Sardinella maderensis	39.34 38.92	42 994	2.98 2.95	65
Pentheroscion mbizi Brachydeuterus auritus	33.74 29.50	28 434	2.55	64
Galeoides decadactylus Chloroscombrus chrysurus	29.12 21.84	70 154	2.20	.,
		56	1.52	
Pomadasys incisus Sepie officinalis bierrodd	20.02			
Sepia officinalis hierredda Ilisha africana	12.88 11.48	28 126	0.97 0.87	
Sepia officinalis hierredda Ilisha africana Pagellus bellottii Trachurus trecae	12.88 11.48 8.26 6.72	28 126 14 14	0,97 0.87 0.63 0.51	
Pomadasys incisus Sepia officinalis hierredda Ilisha africana Pagellus bellottii Trachurus trecae Sphyrna lewini — Total —	12.88 11.48 8.26	28 126 14	0.97 0.87 0.63	

	PROJECT STATION	
	EAR TYPE: PT No:2 POSITION:Lat S	
	tion Long E	1330
TIME :03:25:00 03:55:00 3		
LOG :5601.00 5602.60 1.		
FDEPTH: 0 0	GearCond.code:	
BDEPTH: 43 42	Validity code:	
Towing dir: 335° Win	out: 180 m Speed: 3 kn*10	
Sorted: 55 Kg Total	catch: 221.70 CATCH/HOUR: 44	3.40
SPECIES	CATCH/HOUR & OF TOT. C	SAM
	weight numbers	
Brachydeuterus auritus	148.00 1490 33.38	6
Pagellus bellottii	114.00 2688 25.71	6
Spondyliosoma cantharus	33.84 40 7.63	
Sphyraena guachancho	31.60 32 7.13	
Trachurus trecae	29.60 72 6.68	
Trachurus trecae, juvenile	26.88 1410 6.06	6
Trichiurus lepturus	13.92 24 3.14	
Decapterus rhonchus	13.44 24 3.03	
Pomadasys incisus	10.64 40 2.40	
Galeoides decadactylus	8.32 16 1.88	
Chelidonichthys gabonensis	6,08 48 1.37	
Selene dorsalis	4.16 16 0.94	
Sepiella ornata	0.80 16 0.18	
Citharus linguatula	0.72 24 0.16	
Total	442.00 99.69	

start stop duration TIME :09:05:00 09:35:00 30 (min LOG :5653.00 5654.70 1.70 FOEPTH: 25 25 BOEPTH: 57 56	Area code GearCond. Validity	POSITIO ode: 1 : 2 code: code:	Long E	1012
Towing dir: 325° Wire out:				
Sorted: Kg Total catch:	44.72	CATCH/H	IOUR:	89.44
SPECIES	CATCH/HO weight nu	UR % C mbers	F TOT. C	SAMP
Sardinella maderensis	71.00	272	79.3B	69
Sarda sarda	11.40	8	12.75	
Sardinella aurita	4.60	16	5.14	70
Trachinotus ovatus	1.92	4	2.15	
Selene dorsalis	0.52	2	0.58	
Total	89.44	-	100.00	

	PE: BT No		OJECT STAT TION:Lat	s 1014
start stop duration	_	_	Long	E 1318
TIME :11:12:00 11:42:00 30 (min)			1	
LOG :5666.00 5567.60 1.60			2	
FDEPTH: 56 66		nd.code:		
BDEPTH: 56 66		ty code:		
Towing dir: 225* Wire out:	300 m S	peea: 3	Kn*10	
Sorted: 123 Kg Total catch:	4996.2	0 CATC	H/HOUR :	9992.40
SPECIES			S OF TOT.	C SAMP
	weight	numbers		
Brachydeuterus auritus	3304.00		33.07	
Trachurus trecae	2428.00			
Chloroscombrus chrysurus		9760		
Trachurus trecae, juvenile	1304.00		13.05	
Pagellus bellottii	848.00 449.60		8.49	
Selene dorsalis	130.00	2640	4.50	
Dasyatis centroura	48.00	8 0	0.48	
Raja miraletus Sardinella maderensis	23.20	80	0.48	
Zeus faber	16.00	80	0.16	
	9.60	80	0.10	
Chelidonichthys gabonensis	8.00	320	0.08	
Citharus linguatula	3.00	520	0.00	
Total	9992.40		100.01	•

		ROJECT STATION: 26
DATE: 5/ 3/94 GEAR T	YPE: PT No:2 POSI	(TION:Lat S 955
start stop duration		Long E 1308
	n) Purpose code:	
LOG :5778.50 5780.20 1.70	Area code :	2
FDEPTH: 0 0	GearCond.code:	
BDEPTH: 64 49	Validity code:	
Towing dir: 81* Wire out	: 200 m Speed: 3	kn*10
Sorted: 61 Kg Total catch	: 61.10 CATO	CH/HOUR: 122.20
SPECIES	CATCH/HOUR	S OF TOT. C SAMP
	weight numbers	
Trachurus trecae, juvenile	62.70 2152	51.31 75
Trichiurus lepturus	19.60 36	16.04
Sardinella maderensis	11.50 70	9.41 76
Saurida brasiliensis	10.80 1928	8.84
Brachydeuterus auritus	6.82 60	5.58 77
Sardinella aurita	3.12 12	
Alloteuthis africana	2.48 688	
Selene dorsalis	2.28 16	
Engraulis encrasicolus	2.04 364	
Chloroscombrus chrysurus	0.60 4	0.49
Sepiella ornata	0.26 4	0.21
- Total	122.20	100.00

DATE: 6/ 3/94 GEAR TY start stop duration TIME :03:49:00 04:49:00 60 (min LOG :5820.80 5824.30 3.50	PE: PT No:2) Purpose c Area code	POSITION ode: 1	T STATION Lat S Long E	: 27 1000 1311	
FDEPTH: 10 10 BDEPTH: 40 57 Towing dir: 360° Wire out:	GearCond. Validity	code : code :	0		
Sorted: 125 Kg Total catch:	15000.00	CATCH/HC	UR: 1500	0.00	
SPECIES	CATCH/HG weight nu	UR % Of mbers	TOT. C	SAMP	SPEC
Trachurus trecae	10673.30 1657.23	82247 10769	71.16	81 78	Sele
Trachurus trecae, juvenile Sphyraena guachancho Euthynnus alletteratus	1310.23 694.00 440.33	46262 838 239	8.73 4.63 2.94	79	Sphy Trac Eutl
Sardinella maderensis Pomadasys incisus	128.03 37.10	598 100	0.85	80	Trio
Chloroscombrus chrysurus Boops boops	35,90 23,90	838 119	0.24 0.16		Sard Uras Deca
Total	15000.02	_	100.01		Trae Allo
					Sar Tra Sep
D.M.D. 6/2/04	DE. DØ No.5		T STATION		Sau
DATE: 6/ 3/94 GEAR TY start stop duration TIME :08:55:00 09:25:00 30 (min	PE: PT No:5		Long E		Tota
LOG :5857.70 5859.40 1.70 FDEPTH: 35 35 BDEPTH: 65 72	Area code GearCond.	: 2 code:			
Towing dir: 266° Wire out:	Validity 150 m Spee	d: 4 kn*]			
Sorted: Kg Total catch:		CATCH/H)UR :		
SPECIES		UR %01 umbers	F TOT. C	SAMP	
NO CATCH	0.00				
DATE: 6/ 3/94 GEAR TY start stop duration	PE: PT No:2		T STATION N:Lat S Long E	1: 29 940 1304	SPE
TIME :19:50:00 20:20:00 30 (min LOG :5968.10 5970.00 1.90	Area code	: 2	Long E	1304	Tri- Eng
FDEPTH: 0 0 BDEPTH: 52 67 Towing dir: 279* Wire out:	GearCond. Validity 150 m Spee	code:	0		Sar Tra
Sorted: Kg Total catch:		CATCH/HO		4.44	Tot
SPECIES	CATCH/HC	UR 10	F TOT. C	SAMP	
Trichiurus lepturus Trachurus trecae, juvenile	weight nu 107.40 49.90	umbers 314 2338	61.57 28.61	82	
Alloteuthis africana Saurida brasiliensis	7.68	4694 1530	4.40 3.10	82	
Sepia bertheloti Brachydeuterus auritus Sardinella aurita	1.80 1.24 0.60	14 16 4	1.03 0.71 0.34		
Sepiella ornata	0.42	22	0.24		
Total	174.44		100.00		
DATE: 7/ 3/94 GEAR TY start stop duration	PE: PT No:2	POSITIO		931	SPE
start stop duration TIME :01:39:00 02:09:00 30 (min LOG :6020.00 6021.70 1.70) Purpose o Area code	:ode: 1	Long E	1258	Sel Sco Tra
FDEPTH: 0 0 BDEPTH: 71 78	GearCond Validity 150 m Spee	code : code :	0		Bra Sph Sau
Sorted: 87 Kg Total catch:		CATCH/H		39,68	All Ale
SPECIES	CATCH/H	UR 10	F ТОТ. С	SAMP	Chl Tra Tri
Trichiurus lepturus	weight nu 1674.00	umbers 3554	67.24		Bre Sar
Brachydeuterus auritus Sardinella aurita Sardinella maderensis	443.00 243.00 90.00	4174 888 402	17,79 9,76 3,61	83 84	Tot
Selene dorsalis Trachurus trecae, juvenile	29.00 8.00	86 230	1.16 0.32		
Sarda sarda Total	2.68	2 _	0.11		
DATE: 7/ 3/94 GEAR TY	PE: PT No:2		CT STATION N:Lat S		
start stop duration TIME :04:14:00 04:44:00 30 (min	a) Purpose (code: 1	Long E		
LOG :6041.00 6043.20 2.20 FDEPTH: 0 0 BDEPTH: 112 102	Area code GearCond Validity	. code :			
Towing dir: 80° Wire out:	150 m Spee	d: 4 kn*.		70.00	SPE
Sorted: 101 Kg Total catch:		САТСН/Н		70.00	Chl Tri
SPECIES Selene dorsalis	CATCH/H weight n 141.06	DUR % O umbers 362	F TOT. C 52.24	SAMP	Tot
Sardinella maderensis Trichiurus lepturus	52.66	150	19.50	86	
Trachinotus ovatus	34.92	48	12.93		
Brachydeuterus auritus	23.20 18.16	48 66 98 2	8.59 6.73	85	
	23.20	66 98	8.59	85	

PROJECT STATION: 27

	YPE: PT No:2		ECT STATION	906
start stop duration			Long E	1249
	n) Purpose (
LOG :6174.20 6176.20 2.00	Area code			
FDEPTH: 10 10	GearCond	. code :		
BDEPTH: 114 55	Validity			
Towing dir: 216° Wire out	: 150 m Spee	ed: 4 kn	* 10	
Sorted: 235 Kg Total catch	1: 235.64	CATCH/	HOUR: 4	1.28
SPECIES	CATCH/H	OUR 1	OF TOT. C	SAM
	weight n	umbers		
Selene dorsalis	146.00	422	30.98	9
Sardinella maderensis	132.00	436	28.01	8
Sphyraena guachancho	96.20	106	20.41	8
Trachurus trecae	41.20	70	8.74	9
Euthynnus alletteratus	26.10	26	5.54	8
Trichiurus lepturus	12.10	28	2.57	
Synagrops microlepis	5.64	766	1.20	
Sarda sarda	3.40	2	0.72	
Uraspis secunda	3.06	2	0.65	
Decapterus rhonchus	1.92	2	0.41	
Trachinotus ovatus	1.86	4	0.39	
Alloteuthis africana	0.74	238	0.16	
Sardinella aurita	0.70	2	0.15	
Trachurus trecae, juvenile	0.32	40	0.07	
Sepiella ornata	0.02	2		
Saurida brasiliensis	0.02	4		
Total	471.28		100.00	

DATE: 7/ 3/94 GI	EAR TYPE: PT		OJECT STAT	
		NO:1 PUSI:		
start stop durat			Long	E 1258
TIME :23:40:00 00:10:00 30	(min) Purp	ose code:	1	
LOG :6208.60 620.70 7.90) Area	code :	2	
FDEPTH: 15 10	Gear	Cond.code:		
BDEPTH: 66 46		dity code:		
Towing dir: 210* Wire			****	
lowing dir. 210 wile	, ouc. 200 m	apeed. 47	(1) - 10	
Sorted: 133 Kg Total o	catch: 2945	.58 CATC	H/HOUR:	5891.16
SPECIES	CAT	CH/HOUR	OF TOT.	C SAM
	weight	numbers		
Sardinella maderensis	5768.4		97.92	9
Trichiurus lepturus	49.2		0.84	
Engraulis encrasicolus	41.3		0.70	
Sardinella aurita	26.8	4 88	0 46	

Engraulis encrasicolus	41.36	8712	0.70
Sardinella aurita	26.84	88	0.46
Trachurus trecae, juvenile	5.28	352	0.09
Total	5891.16		100.01

DATE:	8/	3/9	4				GEA	R TY	PE: P	T No:	2	POS	ITIO	N:La	t	s	91
		sta	ırt	s	Lop	dur	ati	ion						Lo	ng	£	125
TIME	:04	1:10):00	04	:40:	00 3	0	(min) Pu	rpose	cod	e:	1		-		
LOG	: 62	247.	00	62	48.7	01.	70		Ar	ea co	ode	:	2				
FDEPTH	1:		5			5			Ge	arCor	nd.co	de :					
BDEPTH	:		45		4	9			Va	lidit	y co	de :					
	To	owin	na d	lir:	160	• Wi	re	out:	150	n So	eed:	4	kn*:	10			

SPECIES	CATCH	/HOUR	S OF TOT. C	SAMP
	weight	numbers		
Selene dorsalis	70.50	176	28.38	95
Scomberomorus tritor	61.40	22	24.72	
Trachurus trecae, juvenile	37.10	2190	14.94	93
Brachydeuterus auritus	32.90	264	13.24	94
Sphyraena guachancho	15.88	14	6.39	
Saurida brasiliensis	8.86	1808	3.57	
Alloteuthis africana	7.24	3430	2.91	
Alectis alexandrinus	5.64	4	2.27	
Chloroscombrus chrysurus	3.54	24	1.43	
Trachurus trecae	2.08	8	0.84	
Trichiurus lepturus	1.66	4	0.67	
Bregmaceros sp.	0.86	832	0.35	
Sardinella maderensis	0.74	2	0.30	
Total	248.40		100.01	

		PROJECT :	STATION: 35
DATE: 8/ 3/94	GEAR TYPE: PT	No:1 POSITION:L	
start stop			ong E 1258
TIME :16:15:00 16:39:0			
LOG :6369.40 6370.90			
FDEPTH: 17 15		Cond.code:	
		dity code:	
Towing dir: 103*	Wire out: 200 m	Speed: 3 kn*10	
Sorted: Kg T	otal catch: 6	.05 CATCH/HOUR	. 15.13
SPECIES	CAT	CH/HOUR & OF T	OT. C SAMP
		numbers	
Chloroscombrus chrysurus			1.05
Trichiurus lepturus	4.3	8 3 2	8.95
Total	15.1	3 10	0.00

		PRO.T	ECT STATION	: 36
DATE: 8/ 3/94 GEAR TYP start stop duration	E: PT No:2		N:Lat S Long E	
TIME :23:05:00 23:35:00 30 (min) LOG :6433.40 6435.30 1.90	Purpose c Area code			
FDEPTH: 10 10 BDEPTH: 61 51	GearCond. Validity	code :		
Towing dir: 90* Wire out:	150 m Spee	di: 3 kn*	10	
Sorted: 54 Kg Total catch:	247.46	CATCH/H	HOUR: 49	4.92
SPECIES	CATCH/H0	UR %	OF TOT. C	SAMP
Sphyraena guachancho	weight nu 119.60	mbers 136	24.17	
Selene dorsalis Trichiurus lepturus	109.60 65.60	576 160	22.14 13.25	
Brachydeuterus auritus Sphyraena barracuda	56.96 53.40	536 2	11.51 10.79	96
Engraulis encrasicolus Sardinella maderensis	33.68 17.68	5768 88	6.81 3.57	
Trachurus trecae, juvenile Sardinella aurita	9.60 7.84	408 16	1.94	97
Saurida brasiliensis Alectis alexandrinus	6.08 5.58	1920 2	1.23	
Chloroscombrus chrysurus Alloteuthis africana	2.64 2.16	24 560 16	0.53	
Ilisha africana Bregmaceros sp.	1.84	160 2	0.37 0.32 0.21	
Atractoscion aequidens	1.06	4	99.99	
Total	474.72		33.35	
DATE: 9/ 3/94 GEAR TY	PE: PT No:2	PROJ POSITI	ECT STATION ON:Lat S	823
start stop duration TIME :02:09:00 02:39:00 30 (min) Purpose (Long E	1300
LOG :6456.30 6457.90 1.60 FDEPTH: 5 5	Area code GearCond	. code :		
BDEPTH: 109 110 Towing dir: 293° Wire out:	Validity 150 m Spee	code: d: 3 km	*10	
Sorted: 78 Kg Total catch:	180.39	CATCH/	HOUR: 3	60.78
SPECIES	CATCH/H		OF TOT. C	SAMP
Trichiurus lepturus		umbers 1104	99.52	0.011
Chloroscombrus chrysurus Brachydeuterus auritus	1.34	8	0.37	
Total	360.78		100.00	
	55 50 N- F		ECT STATIO	
DATE: 9/ 3/94 GEAR TY start stop duration TIME :08:20:00 08:50:00 30 (min	PE: PT No:5		Long E	
LOG : 6500.50 6502.40 1.90 FDEPTH: 35 45	Area cod GearCond	e:3		
BDEPTH: 66 77	Validity 200 m Spec	code:	*10	
Sorted: 46 Kg Total catch:	496.00	CATCH/	HOUR: 9	92.00
SPECIES	CATCH/H	OUR 1	OF TOT. C	SAMP
Chloroscombrus chrysurus		umbers 5572	63.51	100
Sardinella maderensis Trichiurus lepturus	147.00 68.00	620 160	14.82 6.85	99
Sarda sarda Selene dorsalis	63.00 50.00	36 260	6.35 5.04	98
Trachinotus ovatus	34.00	40	3.43	
Total	992.00		100.00	
		PRO	JECT STATIC	N: 39
DATE: 9/ 3/94 GEAR TY start stop duration	PE: PT No:5	POSIT	ION:Lat S Long B	853
TIME :14:01:00 14:43:00 42 (min LOG :6559.90 6563.00 3.10	Area cod	le :3		
FDEPTH: 20 20 BDEPTH: 78 83	GearCond Validity	code:		
-	190 m Spe			67.43
Sorted: Kg Total catch:	47.20	САТСН,	/HOUR:	07.43
SPECIES	CATCH/H weight r	OUR %	OF TOT. C	SAMP
Euthynnus alletteratus Trachinotus ovatus	40.07 27.36	37 67	59.42 40.58	
Total	67.43		100.00	
			JECT STATIC	
start stop duration	(PE: PT No:2		ION:Lat S Long I	
TIME :19:05:00 19:35:00 30 (mir LOG :6607.90 6609.60 1.70 FDEPTH: 10 10	 Purpose Area cod GearCond 	le : 3		
BDEPTH: 68 76	Validity 150 m Spe	code:	n*10	
Sorted: 129 Kg Total catch				189.50
SPECIES	CATCH/H	umbers	OF TOT. C	SAMP
	weight r		52.12	105
Brachydeuterus auritus Selene dorsalis	weight 1 620.00 277.50	5960 1088	23.33	102
Selene dorsalis Trichiurus lepturus Trachurus trecae, juvenile	weight r 620.00 277.50 123.50 81.00	1088 470 1950	23.33 10.38 6.81	104
Selene dorsalis Trichiurus lepturus Trachurus trecae, juvenile Trachurus trecae Sardinella maderensis	weight r 620.00 277.50 123.50 81.00 30.20 28.50	1088 470 1950 140 90	23.33 10.38 6.81 2.54 2.40	
Selene dorsalis Trichiurus lepturus Trachurus trecae, juvenile Trachurus trecae Sardinella maderensis Sphyraena guachancho Scomberomorus tritor	weight r 620.00 277.50 123.50 81.00 30.20 28.50 19.60 4.20	1088 470 1950 140 90 22 2	23.33 10.38 6.81 2.54 2.40 1.65 0.35	104 103
Selene dorsalis Trichiurus lepturus Trachurus trecae, juvenile Trachurus trecae Sardinella maderensis Sphyraena guachancho Scomberomorus tritor Sarda sarda Saurida brasiliensis	weight r 620.00 277.50 123.50 81.00 30.20 28.50 19.60 4.20 2.90 1.20	1088 470 1950 140 90 22	23.33 10.38 6.81 2.54 2.40 1.65 0.35 0.24 0.10	104 103
Selene dorsalis Trichiurus lepturus Trachurus trecae, juvenile Trachurus trecae Sardinella maderensis Sphyraena guachancho Scomberomorus tritor Sarda sarda	weight (227.50) 277.50 123.50 81.00 30.20 28.50 19.60 4.20 2.90 1.20 0.60 0.30	1088 470 1950 140 90 22 2 2 2 350	23.33 10.38 6.81 2.54 2.40 1.65 0.35 0.24 0.10 0.05 0.03	104 103
Selene dorsalis Trichiurus lepturus Trachurus trecae, juvenile Trachurus trecae Sardinella maderensis Sphyraena guachancho Scomberomorus tritor Sarda sarda Saurida brasiliensis Bregmaceros sp.	weight r 620.00 277.50 123.50 81.00 30.20 28.50 19.60 4.20 2.90 1.20 0.60	1088 470 1950 140 90 22 2 2 2 350 280	23.33 10.38 6.81 2.54 2.40 1.65 0.35 0.24 0.10 0.05	104 103

Trachurus trecae, juvenile145-80Brachydeuterus auritus87.50Sphyraena guachancho75.60Trichiurus lepturus51.10Engraulis encrasicolus41.58Scomberomorus tritor21.20Alectis alexandrinus12.50Saurida brasiliensis8.90Selene dorsalis8.34Sardinella aurita6.86			
weight Trachurus trecae, juvenile 149.80 Brachydeuterus auritus 87.50 Sphyraena guachancho 75.60 Trichirurus lepturus 51.10 Engraulis encrasicolus 41.58 Scomberomorus tritor 21.20 Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Selene dorsalis 8.34 Sardinella aurita 6.86		x: 4/3.	12
Trachurus trecae, juvenile145.80Brachydeuterus auritus87.50Sphyreane guachancho75.60Trichiurus lepturus51.10Engraulis encrasicolus41.58Scomberomorus tritor21.20Alectis alexandrinus12.50Saurida brasiliensis8.90Selene dorsalis8.34Sardinella aurita6.86	HOUR SOFT	гот.с s	SAMP
Brachydeuterus auritus 87.50 Sphyraena guachancho 75.60 Trichiurus lepturus 51.10 Engraulis encrasicolus 41.58 Scomberomorus tritor 21.20 Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Selene dorsalis 8.34 Sardinella aurita 6.86	numbers		
Sphyraena guachancho 75.60 Trichiurus lepturus 51.10 Engraulis encrasicolus 41.58 Scomberomorus tritor 21.20 Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Selene dorsalis 8.34 Sardinella aurita 6.86	2496 3	31.66	106
Trichlurus 1.10 Engraulis encrasicolus 41.58 Scomberomorus tritor 21.20 Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Seleme dorsalis 8.34 Sardinella aurita 6.86		18.49	107
Engraulis encrasicolus 41.58 Scomberomorus tritor 21.20 Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Seleme dorsalis 8.34 Sardinella aurita 6.86		15.98	
Scomberomorus tritor 21.20 Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Seleme dorsalis 8.34 Sardinella aurita 6.86		10.80	
Alectis alexandrinus 12.50 Saurida brasiliensis 8.90 Selene dorsalis 8.34 Sardinella aurita 6.86		8,79	
Saurida brasiliensis 8.90 Selene dorsalis 8.34 Sardinella aurita 6.86		4.48	
Selene dorsalis 8.34 Sardinella aurita 6.86	10	2.64	
Sardinella aurita 6.86	1106	1.88	
	84	1.76	
	20	1.45	
Sardinella maderensis 6.72	28	1.42	
Sepia officinalis hierredda 2.18	90	0.46	
Alloteuthis africana 0.64	224	0.14	
Bregmaceros sp. 0.20	210	0.04	
Total 473.12	9	99.99	

start stop duration TIME :03:03:00 03:33:00 30 (min) LOG :6672.50 6674.30 1.80 FDEPTH: 5 5 BDEPTH: 112 116	PT No:2 POSI	3
Sorted: Kg Total catch:	22.45 CATC	CH/HOUR: 44.90
SPECIES Saurida brasiliensis Trichiurus lepturus Euthynnus alletteratus Sphyraena guachancho Echeneis naucrates GOBIIDAE Sardinella maderensis Sepia officinalis hierredda Alloteuthis africana	CATCH/HOUR reight numbers 21.204 32 5.06 6 2.62 4 1.64 2 0.80 300 0.66 2 0.54 22 0.34 44	1.47
Total	44.90	100.01

		PROJE	CT STATION	1: 43
DATE: 10/ 3/94 GEAR TYP	E: PT No:2	POSITIO	N:Lat S	719
start stop duration			Long E	1224
TIME : 19:40:00 20:10:00 30 (min)				
LOG :6841.70 6843.60 1.90	Area code	: 3		
FDEPTH: 10 10	GearCond.c	:ode		
BDEPTH: 110 110	Validity c			
Towing dir: 263° Wire out:	150 m Speed	: 38 kn*:	10	
Sorted: 69 Kg Total catch:	69.67	САТСН/Н	OUR: 13	39.34
SPECIES	CATCH/HOU		F TOT. C	SAMP
		bers	22.50	
Trichiurus lepturus	46.80	114	33.59	
Synagrops microlepis	23.44	3026	16.82	
Euthynnus alletteratus	20.34	24	14.60	
Saurida brasiliensis	18.30	5294	13.13	
Selene dorsalis	12.00	30	8.61	
Auxis thazard	8.96	12	6.43	
Echeneis naucrates	3.86	8 2	2.77	
Katsuwonus pelamis	3.54		2.54	108
Trachurus trecae, juvenile	1.94	78	1.39	109
Illex coindetii	0.16	12	0.11	

Total

PROJECT	STATION: 44
E: PT No:2 POSITION:	
1	Long E 1231
Purpose code: 1	-
Area code : 3	
GearCond.code:	
Validity code:	
117.76 CATCH/HOU	R: 235.52
	TOT. C SAMP
	101. 6 544
	21.91 109
	21.23
	PE: PT No:2 POSITION:) Purpose code: 1 Area code : 3 GearCond.code: Validity code: 10 m Speed: 3 kn*10 117.76 CATCH/HOU CATCH/HOUR OF ' weight numbers 51.60 192

139.34

99.99

SPECIES	CATCH	/HOUR	OF TOT. C	SAMP
	weight	numbers		
Sardinella maderensis	51.60	192	21.91	109
Boops boops	50.00	5104	21.23	
Pellonula leonensis	29.36	3580	12.47	
Trachurus trecae, juvenile	26.08	4098	11.07	
Brachydeuterus auritus	22.20	320	9.43	110
Saurida brasiliensis	20.32	6144	8.63	
Sardinella aurita	20.16	60	8.56	
Trichiurus lepturus	7.20	16	3.06	
Sphyraena guachancho	6.96	8	2.96	
Alloteuthis africana	1.20	160	0.51	
Engraulis encrasicolus	0.32	52	0.14	
Scomber japonicus	0.12	4	0.05	
Total	235.52		100.02	

DMD-11/2/04		PRO	JECT STATIO	N: 45
DATE:11/ 3/94 GEAR TY start stop duration TIME :02:32:00 03:02:00 30 (min	PE: PT No:2		ION:Lat S Long E	
LOG :6896.60 6898.40 1.80 FDEPTH: 10 10	Area cod GearCond	le : 3		
BDEPTH: 110 112	Validity 150 m Spe	code:	*10	
Sorted: Kg Total catch:	7.44	CATCH		14.88
SPECIES	CATCH/F		OF TOT. C	SAMP
		umbers 22	55.24	JAIN
Trichiurus lepturus Sardinella aurita Caranx crysos	2.28	6	15.32 13.17	
Sardinella maderensis	1.70	6	11.42	
Scheneis naucrates	0.72	2	4.84	
Total	14.88		99.99	
DATE: 11/ 3/94 GEAR TY		PRO	JECT STATIO	
start stop duration	PE: PT No:6		ION:Lat S Long E	
LOG :7062.40 7064.10 1.70	Area cod	le : 3		
FDEPTH: 10 10 BDEPTH: 58 71	GearCond Validity	code:		
Towing dir: 250* Wire out:				
Sorted: 78 Kg Total catch:	78.72	CATCH,	HOUR: 1	57.44
PECIES	CATCH/H weight r	OUR %	OF TOT. C	SAMP
Brachydeuterus auritus Baurida brasiliensis	77.00 23.36	594 6356	48.91 14.84	111
Frichiurus lepturus Trachurus trecae, juvenile	21.00	44	13.34	
Sphyraena guachancho	16.50 7.80	1300	10.48	112
Alectis alexandrinus Sepia orbignyana	5.60 2.74	2 4	3.56 1.74	
Alloteuthis africana Gardinella maderensis	2.62 0.52	1742 2	1.66 0.33	
Sepiella ornata Lagocephalus laevigatus	0.24	20 2	0.15	
Engraulis encrasicolus Bregmaceros sp.	0.02	2 12	0.01	
Total	157.44		99.99	
DATE:11/ 3/94 GEAR TY	PE: PT No:6		JECT STATIO ION:Lat S	631
start stop duration TIME :23:00:00 23:32:00 32 (min) Purpose	code: 1	Long E	1156
LOG :7093.50 7095.60 2.10 FDEPTH: 10 10	Area coo GearCond	l.code:		
BDEPTH: 103 99 Towing dir: 46* Wire out:	Validity 150 m Spe	cođe: ed: 4 kr	*10	
Sorted: 25 Kg Total catch:				94.16
SPECIES	CATCH/H		ог тот. с	SAMP
Trichiurus lepturus		umbers 300		SAMP
repeates	03.00	300	88.21 6,46	
	6.08	3244	4 18	
Suthynnus alletteratus	6.08 3.94 1.09	3244 11 11	4.18 1.16	
Euthynnus alletteratus Brachydeuterus auritus 	3.94	11	4.18	
Euthynnus alletteratus Brachydeuterus auritus — — Total —	3.94 1.09 94.17	11 11 PRO:	4.18 1.16 100.01	N: 48
Euthynnus alletteratus Brachydeuterus auritus Total DATE:12/ 3/94 GEAR TY start stop duration	3.94 1.09 94.17 PE: PT No:1	PROJ PROJ	4.18	624
Euthynnus alletteratus Brachydeuterus auritus Total DATE:12/ 3/94 GEAR TY. start stop duration TIME :01:08:00 01:40:00 32 (min LOG :7105.00 7107.30 2.30	3.94 1.09 94.17 PE: PT No:J) Purpose Area coo	11 11 PRO POSIT	4.18 1.16 100.01 JECT STATIO	624
Euthynnus alletteratus Brachydeuterus auritus Total DATE:12/ 3/94 GEAR TY start stop duration TIME :01:08:00 01:40:00 32 (min LOG :7105.00 7107.30 2.30 FDEPTH: 20 17 BDEPTH: 66 78	3.94 1.09 94.17 PE: PT No:1) Purpose Area coo GearCono Validity	11 11 11 PRO: POSIT: code: 1 le : 3 l.code: code:	4.18 1.16 100.01 DECT STATIO ION:Lat S Long E	624
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DATE:12/ 3/94 GEAR TY: brachydeuterus auritus	3.94 1.09 94.17 PE: PT No:1) Purpose Area coo GearConc Validity 200 m Spe 1513.57 CATCH/I	li li PROC POSIT: code: l le : 3 code: code: ed: 4 kr CATCH,	4.18 1.15 1.16 1	624 1202
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Euthynnus alletteratus Brachydeuterus auritus Total Total Total Total Total Total Total Total Total Total Construction 32 (min LOG :7105.00 01:40:00 32 (min LOG :7105.00 01:40:00 32 (min LOG :7105.00 107.00 2.30 FDEPTH: 20 17 BDEPTH: 20 17 BDEPTH: 66 78 Towing dir: 230* Wire out: Sorted: 93 Kg Total catch: Species Selene dorsalis Brachydeuterus auritus Sardinella maderensis Sardinella maderensis Sardinella maderensis Chloroscombrus chrysurus Total DATE:12/ 3/94 GEAR TY Sisti Stop duration TIME :03:23:00 03:53:00 30 (min LOG :7120.70 7122.50 1.80 FDEPTH: 10 10 BDEPTH: 69 77 Towing dir: 252* Wire out: Sorted: 89 Kg Total catch: SPECIES Selene dorsalis Sardinella maderensis Brachydeuterus auritus SPECIES	3.94 1.09 94.17 PE: PT No:1) Purpose Area coc GearConc Validity 200 m Spe 1513.57 CATCH/I weight r 825.00 781.50 781.50 291.00 89.10 33.90 28.50 27.84 26.10 2837.94 PE: PT No:2) Purpose Area coc GearConc Validity 150 m Spe 603.10 CATCH/I weight r 615.00 274.80 121.60 75.60 41.20 26.60	11 11 11 11 11 11 11 11 11 11	4.18 1.16 100.01 VECT STATIO CON:Lat S Long E 4*10 CHOUR: 28 OF TOT. C 29.07 27.54 25.90 10.25 3.14 1.19 99.99 99.99 VECT STATIO CON:Lat S Long E 4*10 CON:Lat S 2.78 10.08 CON:Lat S 2.78 10.08 CON:Lat S 2.78 10.08 CON:Lat S 2.78 10.08 CON:Lat S 2.78 10.08 6.27 3.42 2.21	 624 1202 37.94 SAMP 113 114 N: 49 623 1159 06.20 SAMP 118 117
Euthynnus alletteratus Brachydeuterus auritus Total Total Constraint for the stop duration TIME :01:08:00 01:40:00 32 (min LOG :7105:00 01:40:00 32 (min LOG :7105:00 01:40:00 32 (min EDEPTH: 20 17 BDEPTH: 20 17 BDEPTH: 66 78 Towing dir: 230* Wire out: Sorted: 93 Kg Total catch: SPECIES Selene dorsalis Brachydeuterus auritus Sardinella maderensis Sardinella maderensis Sardinella maderensis Shyraena barsliensis Sphyraena barsacuda Chloroscombrus chrysurus Total DATE:12/ 3/94 GEAR TY Statt stop duration TIME :03:23:00 03:53:00 03 (min LOG :7120.70 7122:50 1.80 FDEPTH: 10 10 BDEPTH: 69 Kg Total catch: Sprecies Selene dorsalis Sardinella maderensis Brachydeuterus auritus Species Selene dorsalis Sardinella maderensis Brachydeuterus auritus Sphyraena barracuda Saurida brasiliensis Sphyraena barracuda Saurida brasiliensis Sphyraena barracuda	3.94 1.09 94.17 PE: PT No:1) Purpose Area coc GearConc Validity 200 m Spe 1513.57 CATCH/I weight r 825.00 781.50 781.50 291.00 89.10 33.90 28.50 27.84 26.10 2837.94 PE: PT No:2) Purpose Area coc GearConc Validity 150 m Spe 603.10 CATCH/I weight r 615.00 274.80 121.60 75.60 41.20 26.60 19.80	11 11 11 11 11 11 11 11 11 11	4.18 1.16 100.01 VECT STATIO ION:Lat S Long E 4*10 VHOUR: 28 OF TOT. C 29.07 27.54 0.92 99.99 VECT STATIO ION:Lat S Long E 4*10 VHOUR: 12 OF TOT. C 50.99 99.99 VECT STATIO CON:Lat S Long E 4*10 VHOUR: 12 0F TOT. C 50.99 22.78 10.08 6.27 3.42 2.21 1.64 1.58	 624 1202 337.94 SAMP 113 114 N: 49 623 1159 066.20 SAMP 118
Euthynnus alletteratus Brachydeuterus auritus Total Total Total Total Total DATE:12/ 3/94 GEAR TY start stop duration TIME :01:08:00 01:40:00 32 (min LOG :7105.00 107.30 2.30 FDEPTH: 20 17 BDEPTH: 20 17 BDEPTH: 66 78 Towing dir: 230* Wire out: Sorted: 93 Kg Total catch: Sorted: 93 Kg Total catch: Selene dorsalis Brachydeuterus auritus Sardinella maderensis Sardinella maderensis Sardinella maderensis Chloroscombrus chrysurus Total DATE:12/ 3/94 GEAR TY Start stop duration TIME :03:23:00 03:53:00 30 (min LOG :7120.70 7122.50 1.80 FDEPTH: 10 10 BDEPTH: 69 77 Towing dir: 252* Wire out: Sorted: 89 Kg Total catch: SPECIES Selene dorsalis Sardinella maderensis Brachydeuterus auritus SPECIES	3.94 1.09 94.17 PE: PT No:1) Purpose Area coc GearCond validity 200 m Spe 1513.57 CATCH// weight r 825.00 735.00 291.00 89.10 33.90 28.50 27.84 26.10 28.50 27.84 26.00 27.60 12.1.60 75.60 28.60 20.5	11 11 11 11 11 11 11 11 11 11	4.18 1.16 1.16 100.01 DECT STATIO CON:Lat S Long E 10 /HOUR: 28 0F TOT. C 29.07 27.54 25.90 10.25 3.14 1.9 1.00 0.98 0.92 99.99 DECT STATIO CON:Lat S Long E 1.19 1.00 0.98 0.92 99.99 DECT STATIO CON:Lat S Long E 1.19 1.00 0.98 0.92 99.99 DECT STATIO CON:Lat S Long E 1.19 1.00 0.98 0.92 22.78 10.08 6.27 3.42 2.21 1.68 1.69 1.60 1.69 1.60 1.60 1.60 1.62 1.60 1.63 1.60 1.63 1.62 1.63 1.63 1.63 1.62 1.63 1.63 1.62 1.63 1.63 1.63 1.62 1.63 1.64 1.63 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64 1.64 1.62 1.64	 624 1202 37.94 SAMP 113 114 N: 49 623 1159 06.20 SAMP 118 117
Euthynnus alletteratus Brachydeuterus auritus Total Total DATE:12/ 3/94 GEAR TY start stop duration TIME :01:00:00 01:40:00 32 (min LOG :7105:00 7107:30 2.30 FDEPTH: 20 17 2.30 FDEPTH: 66 78 Towing dir: 230° Wire out: Sorted: 93 Kg Total catch: SPECIES Selene dorsalis Brachydeuterus auritus Sardinella aurita Trachurus trecae Sphyraena guachancho Saurida brasiliensis Sphyraena guachancho Start stop duration TIME :03:23:00 30:53:00 30 (min LOG :7120.70 7122:50 1.80 FDEPTH: 69 T7 Towing dir: 252° Wire out: Sorted: 89 Kg Total catch: SPECIES Selene dorsalis Sardinella maderensis Brachydeuterus auritus Sorted: 89 Kg Total catch: SPECIES	3.94 1.09 94.17 PE: PT No:1) Purpose Area coc GearCond Validity 200 m Spe 1513.57 CATCH// Weight r 825.00 735.00 291.00 89.10 33.90 28.50 27.84 26.10 28.50 28.50 27.84 26.10 28.50 28.50 27.84 26.10 28.50 27.84 26.10 28.50 29.50 29.50 20.50	11 11 11 11 11 11 11 11 11 11	4.18 1.16 1.16 1.16 1.16 1.16 1.16 1.16 1.16 1.16 1.16 1.17 1.16 1.17 1.19 1.00 1.09 1.09 1.00 1.09 1.00 1.09 1.00	 624 1202 37.94 SAMP 113 114 N: 49 623 1159 06.20 SAMP 118 117

DATE:13/ 3/94 GEAR T			JECT STATION	
start stop duration	YPE: PT No:6	POSITI	Long E	60 115
TIME :22:50:00 23:24:00 34 (min	n) Purpose	code: 1	Long E	110
LOG :7357.70 7360.10 2.40 FDEPTH: 10 10	Area cod GearCond	le : 3		
BDEPTH: 1174 595	Validity	code:		
	200 m Spe	ed: 4 kn	*10	
Sorted: 29 Kg Total catch	: 125.58	CATCH/	HOUR: 22	21.63
SPECIES	CATCH/H weight r	HOUR % Numbers	OF TOT. C	SAL
Trichiurus lepturus	144.71	655	65.30	
Diaphus dumerili Aristeus varidens	42.78 14.54	24314 16964	19.30 6.56	
Sardinella maderensis	11.12	25	5.02	
Saurida brasiliensis	5.72	708	2.58	
Trachurus trecae, juvenile Loligo vulgaris	1.41 0.99	35 282	0.64 0.45	
		202		
Total	221.27		99.85	
DATE:14/ 3/94 GEAR T	YPE: PT No:2	PROJ 2 POSITI		60
start stop duration TIME :02:15:00 02:45:00 30 (mi	n) Purpose	code: 1	Long E	113
LOG :7383.50 7385.40 1.90	Area coo	de : 3		
FDEPTH: 10 10 BDEPTH: 571 735	GearCond Validity			
Towing dir: 52° Wire out:	: 200 m Spe	ed: 3 kr	n*10	
Sorted: 117 Kg Total catch				46.62
Solies. If hy Total Catch	: 323.31	CATCH,	100K: 0	.0.02
SPECIES	CATCH/H	HOUR	OF TOT. C	SAI
Trichiurus lepturus	weight r 633.06	numbers 1918	97.90	
Diaphus dumerili	10.78	4790	1.67	
Euthynnus alletteratus Saurida brasiliensis	2.72	2 16	0.42	
_		10	0.01	
Total	646.62		100.00	
DATE:14/ 3/94 GEAR T	YPE: PT No:	PRO.	JECT STATIO	N: 1
start stop duration			Long E	
TIME :04:29:00 04:59:00 30 (mi LOG :7396.80 7398.50 1.70	n) Purpose Area coo			
FDEPTH: 10 10	GearCond	d.code:		
BDEPTH: 59 53	Validity	y code:		
Towing dir: 80° Wire out	: 200 m Spe	ed: 36 kr	n*10	
Sorted: 87 Kg Total catch	: 116.26	CATCH	/HOUR: 2	32.5
SPECIES	CATCH/I		OF TOT. C	SA
Sardinella maderensis	weight 1 201.86	numbers 766	86.81	1
Trichiurus lepturus Trichiurus lepturus	8.00	26	3.44	-
Trichiurus lepturus Sphyraena guachancho	8.00 5.80	26 6	3,44 2,49	
Selar crumenophthalmus	4.82	10	2.07	
Trachurus trecae, juvenile	4.60 2.92	134	1.98	13
Selene dorsalis Saurida brasiliensis	2.32	14 430	1.26	
Echeneis naucrates	2.20	2	0.95	
Total -	240.52		103.44	
	YPE: PT No:		JECT STATIO	N:
		b POSIT	ION:Lat S	5
start stop duration TIME :19:20:00 19:50:00 30 (mi	n) Purpose			5
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10	Area con	code: 1 de : 3	ION:Lat S	5
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10	Area con GearConn	code: 1 de : 3 d.code:	ION:Lat S	5
TIME :19:20:00 19:50:00 30 (mi Log :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64	Area con	code: 1 de : 3 d.code: y code:	ION:Lat S Long E	5
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64	Area con GearCone Validity : 150 m Spe	code: 1 de : 3 d.code: y code: sed: 39 ki	ION:Lat S Long E n*10	5
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180* Wire out Sorted: 13 Kg Total catch	Area con GearCon Validity : 150 m Spe : 13.15 : 13.15	code: 1 de : 3 d.code: y code: sed: 39 ki CATCH HOUR &	ION:Lat S Long E n*10	5 11 26.3
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180* Wire out Sorted: 13 Kg Total catch	Area con GearConn Validity : 150 m Spe : 13.15 : 13.15 CATCH/1 weight n	code: 1 de : 3 d.code: y code: y code: sed: 39 ki CATCH HOUR &	ION:Lat S Long E n*10 /HOUR: OF TOT. C	5 11 26.3
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180* Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus	Area con GearConn Validity : 150 m Spe :: 13.15 CATCH/1 weight 1 13.36 7.16	code: 1 de : 3 d.code: y code: ed: 39 kn CATCH, HOUR houmers 2672 232	ION:Lat S Long E n*10 /HOUR: OF TOT. C 50.80 27.22	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus	Area con GearCon Validit; : 150 m Spe :: 13.15 CATCH/I weight n 13.36 7.16 2.08	code: 1 de : 3 d.code: y code: bed: 39 kn CATCH HOUR & numbers 2672 232 74	ION:Lat S Long E /HOUR: OF TOT. C 50.80 27.22 7.91	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180* Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile	Area con GearCon Validit; : 150 m Spe : 13.15 CATCH/1 weight 1 13.36 7.16 2.08 1.78 0.76	code: 1 de : 3 d.code: y code: ed: 39 kn CATCH, HOUR houmers 2672 232	ION:Lat S Long E n*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda arda	Area con GearCom validit; : 150 m Spe : 13.15 CATCH// weight 1 13.36 7.16 2.08 1.78 0.76 0.38	code: 1 de : 3 d. code: y code: ed: 39 ki CATCH, HOUR 1000 2672 232 74 66 358 2	ION:Lat S Long E n*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 PDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180* Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeutrus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata	Area con GearCon Validit; : 150 m Spe : 13.15 CATCH/1 weight 1 13.36 7.16 2.08 1.78 0.76 0.38 0.28	code: 1 de : 3 d. code: y code: ed: 39 ki CATCH HOUR HOUR Numbers 232 74 66 358 2 18	ION:Lat S Long E n*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda arda	Area con GearCom validit; : 150 m Spe : 13.15 CATCH// weight 1 13.36 7.16 2.08 1.78 0.76 0.38	code: 1 de : 3 d. code: y code: ed: 39 ki CATCH, HOUR 1000 2672 232 74 66 358 2	ION:Lat S Long E n*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trichiurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus	Area con GearCon Validit: : 150 m Spe : 13.15 CATCH/I weight 1 13.36 7.16 2.08 1.78 0.76 0.76 0.28 0.22 0.18 0.06	code: 1 de : 3 d.code: y code: sed: 39 ki CATCH, HOUR & NUMBERS 2672 2672 2672 2672 2672 2672 2672 267	ION:Lat S Long E h*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.84 0.68 0.23	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trichiurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Emgraulis encrasicolus	Area con GearCon Validit; : 150 m Spt : 13.15 CATCH/1 weight 1 13.36 7.16 2.08 1.78 0.76 0.38 0.22 0.18	code: 1 de : 3 dy code: ted: 39 ki CATCH, HOUR & numbers 232 72 74 66 358 2 18 8 2	ION:Lat S Long E n*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.84 0.68	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trichiurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus Bregmaceros sp.	Area con GearCon Validit: : 150 m Spe : 13.15 CATCH/I weight 1 13.36 7.16 2.08 1.78 0.76 0.76 0.28 0.22 0.18 0.06	code: 1 de : 3 d.code: y code: wed: 39 ki CATCH, HOUR & NUMBERS 2672 2672 2672 2672 2672 2672 2672 267	ION:Lat S Long E h*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.84 0.68 0.23	5 11 26.3 SA
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 PDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180* Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis	Area con GearCon Validit; : 150 m Spec : 13.15 CATCH/I weight 1 13.36 7.16 2.08 1.78 0.28 0.28 0.22 0.18 0.06 0.04	code: 1 de : 3 d. code: sed: 39 ki cATCH HOUR 2672 232 74 66 358 8 2 18 8 2 10 58	ION:Lat S Long E h*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.68 0.23 0.15 	5 11 26.3 SA 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus tercae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus Bregmaceros sp. Total T	Area con GearCon Validit; : 150 m Spec : 13.15 CATCH/I weight 1 13.36 7.16 2.08 1.78 0.28 0.28 0.22 0.18 0.06 0.04	code: 1 de : 3 d. code: y code: y code: y code: CATCH, HOUR houmbers 2672 2672 2672 74 66 358 26 358 2 18 8 8 2 10 58	ION:Lat S Long E Long E n*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.23 0.15 	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus tercae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 GEAR T start stop duration TIME :22:28:00 32:58:00 30 (mi	Area con GearCon Validit; : 150 m Spec : 13.15 CATCH/I weight 1 13.36 7.16 0.38 0.76 0.38 0.22 0.18 0.04 26.30 YPE: PT No::	code: 1 de : 3 d. code: red: 39 ki cATCH, HOUR & CATCH, HOUR & 2672 232 74 66 358 8 2 18 8 2 10 56 9 005TT code: 1	ION:Lat S Long E Long E A+10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.23 0.15 99.99 JECT STATIO ION:Lat S Long E	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Selene dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 GEAR T start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00	Area con GearCom validit: : 150 m Spec : 13.15 CATCH/ weight 1 13.36 7.16 2.08 0.76 0.76 0.76 0.76 0.78 0.28 0.28 0.22 0.18 0.06 0.04 26.30 YPE: PT No: Area con	code: 1 de : 3 d. code: y code: y code: xed: 39 ki CATCH, HOUR HOUR HOUR 18 8 2 10 58 2 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 58 58 58 58 58 58 58 58 58	ION:Lat S Long E Long E A+10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.23 0.15 99.99 JECT STATIO ION:Lat S Long E	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 CEAR T start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00	Area con GearCon Validit: : 150 m Spec : 13.15 CATCH/I weight 13.36 7.16 7.16 7.16 0.28 0.76 0.38 0.22 0.18 0.04 26.30 YPE: PT No:: n) Purpose Area con GearCon	code: 1 de : 3 d. code: red: 39 ki CATCH, HOUR & CATCH, HOUR & CATCH, CATCH, CATCH, 227 232 74 66 358 8 2 18 8 2 10 58 8 2 10 58 6 9 CATCH, CA	ION:Lat S Long E Long E A+10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.23 0.15 99.99 JECT STATIO ION:Lat S Long E	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 GEAR T start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 10 10 BDEPTH: 10 10	Area con GearCom validit: : 150 m Spec : 13.15 CATCH/ weight 1 13.36 7.16 2.08 0.76 0.76 0.76 0.76 0.78 0.28 0.28 0.22 0.18 0.06 0.04 26.30 YPE: PT No: Area con	code: 1 de : 3 d. code: y code: y code: xed: 39 ki CATCH, HOUR HOUR HOUR 10 58 21 18 8 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 10 58 2 2 10 58 2 2 10 58 2 2 2 2 2 2 2 2 2 2 2 2 2	ION:Lat S Long E Long E 0F TOT. C 50.80 27.22 7.91 6.77 2.89 1.64 1.06 0.23 0.15 99.99 JECT STATIO ION:Lat S Long E	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Selene dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 GEAR T Start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 10 10 BDEFTH: 170 197 Towing dir: 270° Wire out	Area con GearCom validit: : 150 m Spec : 13.15 CATCH/ weight 1 13.36 2.08 0.76 0.76 0.76 0.76 0.78 0.28 0.18 0.06 0.04 26.30 YPE: PT No:: n) Purpose Area con GearCom validit: : 150 m Spec	code: 1 de : 3 d. code: y code: y code: CATCH, HOUR HOUR HOUR HOUR CATCH, HOUR CATCH, HOUR CATCH, CATCH, HOUR CATCH,	ION:Lat S Long E Long E A*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.84 0.23 0.15 	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Seleme dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 GEAR T start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 10 10 BDEPTH: 10 10	Area con GearCom validit: : 150 m Spec : 13.15 CATCH/ weight 1 13.36 2.08 0.76 0.76 0.76 0.76 0.78 0.28 0.18 0.06 0.04 26.30 YPE: PT No:: n) Purpose Area con GearCom validit: : 150 m Spec	code: 1 de : 3 d. code: y code: y code: CATCH, HOUR HOUR HOUR HOUR CATCH, HOUR CATCH, HOUR CATCH, CATCH, HOUR CATCH,	ION:Lat S Long E Long E A*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.84 0.23 0.15 	5 11 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Selene dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 GEAR T Start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 10 10 BDEFTH: 170 197 Towing dir: 270° Wire out	Area con GearCom validit: : 150 m Spet : 13.15 CATCH/ weight 1 13.36 2.08 0.76 0.76 0.76 0.78 0.78 0.28 0.18 0.22 0.18 0.04 26.30 YPE: PT No: No: validit: : 150 m Spet : 162.62 CATCH/	code: 1 de : 3 d. code: y code: y code: cATCH, HOUR ADD CATCH, CATCH, CATCH B CODE: 1 dc: 1 d. code: 1 d. cod	ION:Lat S Long E Long E A*10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 1.06 0.84 0.23 0.15 	5 11 26.3 5A 1 1 1 1 25.2
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 PDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trachirus lepturus Trachirus lepturus Trachurus lepturus Selene dorsalis Emgnaulis encrasicolus Eregnaceros sp. Total DATE:14/ 3/94 GEAR T Start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 170 197 Towing dir: 270° Wire out Sorted: 23 Kg Total catch	Area con GearCom Validit; : 150 m Spe :: 13.15 CATCH/ weight 1 13.36 7.16 2.08 1.78 0.76 0.38 0.22 0.18 0.06 0.04 26.30 YPE: PT No: GearCom Validit; : 162.62 CATCH/ weight 1	code: 1 de : 3 d. code: y code: y code: 2672 232 74 66 358 2 18 8 2 10 58 9 code: 1 de : 3 d.code: 1 de : 3 d.code: 1 d.code: 1 d.code: 3 x y code: 1 d.code: 3 x y code: 4 x y code: 4 x x x x x x x x x x x x x x x x x x x	ION:Lat S Long E Long E A A A Long E A A A A A A A A A A A A A	5 11 26.3 5A 1 1 1 1 25.2
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trachirus lepturus Trachirus lepturus Trachirus lepturus Trachirus lepturus Bregnaulis encrasicolus Engraulis encrasicolus Engraulis encrasicolus Bregnaceros sp. Total DATE:14/ 3/94 GEAR T start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEFTH: 170 197 Towing dir: 270° Wire out Sorted: 23 Kg Total catch SPECIES Trichirus lepturus	Area con GearCom Validit; : 150 m Spe : 13.15 CATCH/1 weight 1 13.36 7.16 2.08 1.78 0.76 0.38 0.22 0.18 0.06 0.04 26.30 YPE: PT No: GearCom Validit; : 162.62 CATCH/1 weight 1 324.10 0.56	code: 1 de : 3 d. code: red: 39 ki CATCH, HOUR HOUR CATCH, HOUR CATCH, CATCH, CATCH, CATCH, CATCH, CATCH, CODE: 1 d. code: 3 d. code: 1 d. code: 4 d. code: 3 d. code: 3 d. code: 3 d. code: 3 d. code: 3 d. code: 4 d. co	ION:Lat S Long E Long E Ion + 10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 0.68 0.23 0.15 99.99 JECT STATIO ION:Lat S Long E n+10 /HOUR: 3 OF TOT. C 99.65 0.17	5. 11. 26.3 SA 1 1 1
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichiurus lepturus Trachurus trecae, juvenile Alloteuthis africana Sarda sarda Sepiella ornata Pteroscion peli Selene dorsalis Engraulis encrasicolus Bregmaceros sp. Total DATE:14/ 3/94 CEAR T TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 Sorted: 23 Kg Total catch SPECIES Trichiurus lepturus MYCTOPHIDAE	Area con GearCom Validit: : 150 m Spec : 13.15 CATCH/ weight 1 13.36 2.08 0.76 0.76 0.76 0.78 0.28 0.28 0.18 0.06 0.04 26.30 YPE: PT No:: n) Purpose Area con GearCom Validit: : 150 m Spe : 162.62 CATCH/ weight 324.10 0.56 0.42	code: 1 de : 3 d. code: y code: y code: y code: CATCH, HOUR HOUR CATCH, HOUR CATCH, CATCH, CATCH, HOUR CATCH, HOUR NUMBERS 798 672 14	ION:Lat S Long E Long E Iong E OF TOT. C 50.80 27.22 7.91 6.77 2.89 6.77 2.89 1.44 1.06 0.84 0.23 0.15 	5 11 26.3 1 1 1 1 1 1 25.2
TIME :19:20:00 19:50:00 30 (mi LOG :7543.00 7545.10 2.10 FDEPTH: 10 10 BDEPTH: 64 64 Towing dir: 180° Wire out Sorted: 13 Kg Total catch SPECIES Saurida brasiliensis Brachydeuterus auritus Trichirus lepturus Trichirus lepturus Trichirus lepturus Trichirus lepturus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis encrasicolus Bregnaulis (Catal) DATE:14/ 3/94 GEAR T start stop duration TIME :22:28:00 22:58:00 30 (mi LOG :7568.40 7570.40 2.00 FDEPTH: 10 10 BDEPTH: 170 197 Towing dir: 270° Wire out Sorted: 23 Kg Total catch SPECIES Trichirus lepturus MyCTOPHIDAE	Area con GearCom Validit; : 150 m Spe : 13.15 CATCH/1 weight 1 13.36 7.16 2.08 1.78 0.76 0.38 0.22 0.18 0.06 0.04 26.30 YPE: PT No: GearCom Validit; : 162.62 CATCH/1 weight 1 324.10 0.56	code: 1 de : 3 d. code: red: 39 ki CATCH, HOUR HOUR CATCH, HOUR CATCH, CATCH, CATCH, CATCH, CATCH, CATCH, CODE: 1 d. code: 3 d. code: 1 d. code: 4 d. code: 3 d. code: 3 d. code: 3 d. code: 3 d. code: 3 d. code: 4 d. co	ION:Lat S Long E Long E Ion + 10 /HOUR: OF TOT. C 50.80 27.22 7.91 6.77 2.89 1.44 0.68 0.23 0.15 99.99 JECT STATIO ION:Lat S Long E n+10 /HOUR: 3 OF TOT. C 99.65 0.17	5 11 26.3 1 1 1 1 1 1 25.2

		PROJE	CT STATIO	N: 55
start stop dura	GEAR TYPE: BT No:1	POSITIO	N:Lat S Long E	539
TIME :00:12:00 00:42:00 30 LOG : 573.00 574.80 1.4) (min) Purpose c 30 Area code	ode: 2 ; 3		
FDEPTH: 230 245 BDEPTH: 230 245	GearCond. Validity	code:		
Towing dir: 353* Win				
Sorted: 77 Kg Total		САТСН/Н		06.14
PECIES	CATCH/HO weight nu	mbers	OF TOT. C	SAMP
terothrissus belloci ynagrops microlepis	64.00 43.00	498 2224	31.05 20.86	
hlorophthalmus atlanticus arapenaeus longirostris	34.80 18.60	1406 7770	16.88 9.02	
odaropsis eblanae embrops sp.	15.40 15.40	282 332	7.47	
richiurus lepturus Merluccius polli	4.04	22 66	1.96	
Pseudotolithus senegalensis	2.84	18	1.38	
Solenocera africana Lamprogrammus sp.	2.68 0.44	276 10	1.30 0.21	
Vezumia aegualis Cynoponticus ferox	0.42 0.40	10 16	0.20 0.19	
Peristedion cataphractum Munida sp.	0.40 0.34	56 90	0.19 0.16	
Scyliorhinus stellaris Soelorinchus coelorhincus	0.20	2 16	0.10 0.06	
Fotal	206.14	-	99.98	
			ECT STATIO	
start stop dur	GEAR TYPE: BT No:1 ation	POSITIO	DN:Lat S Long I	5 530 5 1125
TIME :02:05:00 02:35:00 3 LOG :7584.80 7586.40 1.	0 (min) Purpose c	:ode: 2	-	
FDEPTH: 411 416 BDEPTH: 411 416	GearCond. Validity	code:		
Towing dir: 10° Wi	re out:1220 m Spee	d: 3 kn*	10	
Sorted: 71 Kg Total	catch: 71.03	CATCH/I	HOUR: 1	L42.06
PECIES	CATCH/HO	UR LO	ог тот. с	SAMP
erluccius polli	weight nu 96,60	unbers 184	68.00	
entrophorus granulosus Macruronus caninus	23.40 2.82	6 22	16.47 1.99	
Fodaropsis eblanae Laemonema laureysi	2.62 1.56	40 32	1.84 1.10	
Synagrops microlepis Epigonus telescopus	1.48	96 8	1.04	
Deania profundorum	1.26 1.22	18 2	0.89 0.86	
Zenopsis conchifer Aristeus varidens	1.20	2 106	0.84	
Malacocephalus occidentalis	1.12 1.10 0.96	12	0.77 0.68	
Yarella blackfordi Geryon maritae	0.96	104	0.68	
Illex coindetii Peristedion cataphractum	0.76	66	0.53	
Etmopterus pusíllus Malacocephalus laevis	0.42	2	0.30	
Chlorophthalmus atlanticus Parapenaeus longirostris	0.42 0.36	14 38	0.30 0.25	
Trigla lyra Chaunax pictus	0.30 0.28	2 4	0.21	
Stereomastis sp. Bembrops sp.	0.28 0.16	20 4	0.20 0.11	
Munida sp. Nezumia aequalis	0.10	20 2	0.07	
Solenocera africana	0.08	8	0.06	
fotal	142.06		100.02	
	GEAR TYPE: BT No:1		ECT STATI ON:Lat	s 535
start stop dur TIME :03:43:00 04:13:00 3	ation 10 (min) Purpose (code: 2	Long	E 1124
LOG :7592.70 7594.30 l.	60 Area code GearCond	e : 3 .code:		
FDEPTH: 510 513 BDEPTH: 510 513 Towing dir: 10° Wí	Validity	code :	* 10	
Sorted: 41 Kg Total	-			207.64
SPECIES	weight nu	umbers	OF TOT. C	SAMP
Merluccius polli Malacocephalus occidentalis	127.50 39.44	674 130	61.40 18.99	
Malacocephalus laevis Macruronus caninus	20.34 10.10	240 168	9.80	
Etmopterus pusillus Hoplostethus sp.	3.08	6 30	1.48	
Yarella blackfordi	1.60	194	0.77	
Halosaurus sp. Conger conger	1.54	40 34	0.48	
Parapenaeus longirostris Chaunax pictus	0.60 0.44	94 50	0.29 0.21	
Total	207.58		99.95	
			ECT STATI	
start stop du	GEAR TYPE: PT No:2 ration		ON:Lat Long	S 536 E 1131
TIME :05:38:00 06:08:00 (LOG :7602.10 7603.80 1	30 (min) Purpose	code: 1 e ; 3	-	
FDEPTH: 10 10 BDEPTH: 306 272	GearCond Validity	. code :		
Towing dir: 90° Wi	re out: 200 m Spee	ed: 3 kn	*10	
Sorted: 33 Kg Total	catch: 32.93	CATCH/	HOUR :	65.86
SPECTES	CAMOU (11)	ាររទ «	0 5 707 0	SAMP
SPECIES	CATCH/H weight n	umbers	OF TOT. C	SAMP
Euthynnus alletteratus Auxis thazard	15.14	24 14	42.97 22.99	
MESOPELAGIC MIX Katsuwonus pelamis Trichiurus lepturus	11.86 7.36	4	18.01 11.18	
	3.20	20	4.86	
Total	65.86		100.01	

		000 70		1: 59
	TYPE: PT No:6	POSITIO		531
TIME :20:08:00 20:43:00 35 (π	in) Purpose c	ode: 1	Long E	1139
LOG :7738.70 7741.10 2.40 FDEPTH: 10 10	Area code GearCond.	code:		
BDEPTH: 128 128 Towing dir: 180° Wire ou	Validity t: 150 m Spee	code: d: 4 kn*.	10	
Sorted: 41 Kg Total cate	ch: 138.22	САТСН/Н	OUR: 2	36.95
SPECIES	CATCH/HO		F ТОТ. С	SAMP
Trichiurus lepturus	weight nu 210.69	mbers 1665	88.92	
MYCTOPHIDAE Echeneis naucrates	9.09	6483	3.84	
Synagrops microlepis	3.77	274 2	1.59	
Auxis thazard Saurida brasiliensis	2.35	411	0.99	
Small squids Miracorvina angolensis	2.18 0.91	722 10	0.92 0.38	
GOBIIDAE Sepiella ornata	0.27 0.05	27 5	0.11 0.02	
Total	236.96	-	100.00	
DATE:15/ 3/94 GEAR	TYPE: PT No:6		CT STATIO	525
start stop duration TIME :22:34:00 23:06:00 32 {	n		Long E	1144
LOG :7756.00 7758.30 2.30 FDEPTH: 10 10	Area code GearCond	e : 3 .code:		
BDEPTH: 83 83 Towing dir: 344* Wire ou	Validity	code:	10	
				75.62
Sorted: 16 Kg Total cat	en: 40.33	CATCH/H	JUR:	
SPECIES	CATCH/HC		F TOT. C	SAMP
Brachydeuterus auritus	31.99	umbers 1039	42.30	123
Trichiurus lepturus Pentheroscion mbizi	16.91 11.64	563 182	22.36 15.39	
MESOPELAGIC MIX Sardinella aurita	5.01 3.75	3754 13	6.63 4.96	124
Saurida brasiliensis	3.43 2.55	686 101	4.54 3.37	125
	0.34	2	0.45	
Trachurus trecae, juvenile Auxis thazard				
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:48:00 00:59:00 11 (LOG :7770.30 7770.90 0.60 FDEPTH: 237 238 BDEPTH: 237 238	min) Purpose Area cod GearCond Validity	POSITIO code: 2 e : 3 .code: code:	100.00 ECT STATIC DN:Lat S Long F	526
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:48:00 00:59:00 11 (LOG :7770.30 7770.90 0.60 FDEPTH: 237 238	TYPE: BT No:1 n min) Purpose GearCond Validity ut: 690 m Spec	POSITIO code: 2 e : 3 .code: code: ed: 3 kn*	ECT STATIC DN:Lat S Long F	526
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR Start stop duratio TIME:00:48:00 00:55:00 11 (LOG :7770.30 7770.90 0.60 FDEPTH: 237 238 BDEPTH: 237 238 Towing dir: 360* Wire or	TYPE: BT No:1 n min) Purpose Area cod GearCond Validity ut: 690 m Spec ch: 7.05 CATCH/H	POSITIO code: 2 e : 3 .code: code: ed: 3 kn [*] <i>CATCH/D</i>	ECT STATIC DN:Lat S Long F	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:48:00 00:59:00 11 (LOG :7770.30 7770.90 0.60 FOEPTH: 237 238 BDEPTH: 237 238 Towing dir: 360* Wire o sorted: 3 Kg Total cat SPECIES Centrophorus granulosus	TYPE: BT No:1 n nin) Purpose of Area cod GearCond Validity ut: 690 m Spec ch: 7.05 CATCH/H weight n 18.55	POSITIC code: 2 e : 3 .code: code: ed: 3 kn ⁴ <i>CATCH/I</i> DUR % (umbers 5	CT STATIC N:Lat S Long F 10 HOUR: OF TOT. C 48.24	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME 00:48:00 00:59:00 11 (LOG :7770.30 7770.90 0.60 FDEPTH: 237 238 BDEPTH: 237 238 Towing dir: 360* Wire o Sorted: 3 Kg Total cat SPECIES Centrophorus granulosus Parapenaeus longirostris Solencera africana	TYPE: BT No:1 n Area cod- GearCond Validity ut: 690 m Sped ch: 7.05 CATCH/H weight n 18.55 5.95 3.00	POSITIC Code: 2 e : 3 .code: 3 code: ed: 3 kn ⁴ <i>CATCH/I</i> DUR % (umbers 5 622 316	ECT STATIC IN:Lat S Long F 10 WOUR: DF TOT. C 48.24 15.47 7.80	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:48:00 00:59:00 11 (LOG 7770:30 7770.90 0.60 FODETH: 237 238 BDEPTH: 237 238 Toving dir: 360° Wire o Sorted: 3 Kg Total cat SPECIES Centrophorus granulosus Parapenaeus longirostris	TYPE: BT No:1 n Area cod GearCond Validity ut: 690 m Spee ch: 7.05 CATCH/H weight n 18.55 5.95	POSITIO code: 2 e : 3 .code: code: ed: 3 kn [*] <i>CATCH/1</i> DUR % (umbers 5 622 316 16	CT STATIC DN:Lat S Long F 10 WOUR: DF TOT. C 48.24 15.47	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR DATE:16/ 3/94 CEAR tstart stop duratio TIME :00:48:00 00:55:00 11 (LOG :7770.30 7770.90 0.60 POEPTH: 237 238 BOEPTH: 237 238 BOEPTH: 237 238 Toving dir: 360 ⁻ Wire o Sorted: 3 Kg Total cat SPECIES Centrophorus granulosus Parapenaeus longirostris Solenocera africana Pterothrissus belloci Myliobatis aquila Pseudotolithus senegalensis	TYPE: BT No:1 n min) Purpose GearCond Validity ut: 690 m Sper ch: 7.05 CATCH/H weight n 18.55 5.95 3.00 2.78 1.58 1.09	POSITIC Code: 2 e : 3 .code: code: ed: 3 kn ⁴ <i>CATCH/I</i> DUR % C Jumbers 622 316 16 5 5	SCT STATIC DN:Lat S Long F +10 +00R: DF TOT. C 48.24 15.47 7.80 7.23 4.11 2.83 2.70	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:46:00 00:59:00 11 (IOC :7770:30 7770.90 0.60 FDEPTH: 237 238 BOEPTH: 237 238 DOEPTH: 237 238 Towing dir: 360' Wire o Sorted: 3 Kg Total cat SPECIES Centrophorus granulosus Parapenaeus longirostris Solenocera africana Pterothrissus belloci Myliobatis aquila Pseudotolithus senegalensis Aristeus varidens Conger conger	TYPE: BT No:1 n min) Purpose- GearCond Validity ut: 690 m Sper ch: 7.05 CATCH/H weight n 18.55 5.95 3.00 2.78 1.58 1.09 1.04 0.76	POSITIO code: 2 e : 3 code:	SCT STATIC IN:Lat S Long F 400 WOUR: DF TOT. C 48.24 15.47 7.80 7.23 4.11 2.83 2.70 1.98	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:46:00 00:59:00 11 (LOC :7770.30 7770.90 0.60 FDEPTH: 237 238 BOEPTH: 237 238 BOEPTH: 237 238 Towing dir: 360' Wire o Sorted: 3 Kg Total cat SPECIES Centrophorus granulosus Parapenaeus longirostris Solencera africana Pterothrissus belloci Myliobatis aquila Pseudotolithus senegalensis Aristeus varidens Conger conger MYCTOPHIDAE Chaunar pictus	TYPE: BT No:1 n min) Purpose- Area cod GearCond Validity ut: 690 m Spec ch: 7.05 CATCH/H weight n 18.55 3.00 2.78 1.58 1.09 1.04 0.76 0.65 0.49	POSITIC Code: 2 e. : 3 .code: code: code: cate:	CT STATIC N:Lat S Long F 10 WOUR: DF TOT. C 48.24 15.47 7.80 7.23 4.11 2.83 2.70 1.98 1.69 1.27	526 1135 38.45
Trachurus trecae, juvenile Auxis thazard Total DATE:16/ 3/94 CEAR start stop duratio TIME :00:46:00 00:59:00 11 (IOC :7770:30 7770.90 0.60 FDEPTH: 237 238 BDEPTH: 237 238 Towing dir: 360* Wire o Sorted: 3 Kg Total cat SPECIES Centrophorus granulosus Farapenaeus longirostris Solenocera africana Pterothrissus belloci Myliobatis aquila Pseudotolithus senegalensis Aristeus varidens Conger conger MYCTOPHIDAE Chaunay pictus Bembrops sp.	TYPE: BT No:1 n min) Purpose- Area cod GearCond Validity ut: 690 m Spec ch: 7.05 CATCH/H weight n 18.55 3.00 2.78 1.58 1.09 1.04 0.65 0.49 0.49	POSITIC code: 2 e : 3 .code: code: code: code: code: code: code: code code: code code: code code: code code: code code code code code code code code	CT STATIC N:Lat S Long F 10 WOUR: DF TOT. C 48.24 15.47 7.83 4.11 2.83 2.70 1.98 1.69 1.27 1.27	526 1135 38.45
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ANNEX II Instruments and fishing gear used.

Acoustic instruments

The SIMRAD EK500/38 Khz scientific sounder was used during the survey for estimation of fish density. The EK500 has a built- in digital echo integrator, but the Bergen Echo Integrator system (BEI) was used throughout the survey. The details of the instrument settings are as follows:

Transceiver settings:

Bandwidth	Wide (3.8 Khz)
Pulse length	Medium (1 ms)
Max Power	2000 Watt
Sv Transducer gain	27.8 dB
Ts Transducer gain	28.1 dB

Printer settings:

Range	0 - 100 or 0 - 250 m
TVG	20 log R
TS Colour min	- 50 dB
Sv Colour min	- 64 dB

An ES38B with a 6.8° -3dB beamwidth transducer was used for integration.

A calibration experiment using a standard copper sphere, performed in Baia dos Tigres 23/2 1994 gave the following results: Sv Transducer gain 27.8 dB, Ts Transducer gain 28.1 dB.

Glossary:

Sv Transducer gain: Peak transducer gain assumed during computation of volume backscattering strength.

Ts Transducer gain: Peak transducer gain assumed during computation of target strength.

Ts Colour min : Lower limit of colour scale relative to target strength.

Sv Colour min : Lower limit of colour scale relative to Volume back scattering.

Hydrography

Conductivity, temperature, density and oxygen were sampled regularly at CTD stations with a Seabird CTD-sonde. The salinity was calculated by a computer.

Fishing gear

Two different sized pelagic trawls and one bottom trawl were used during the survey. The following drawings show the size of these trawls.

F/F Dr. Fridtjof Nansen

