NORAD - FAO/UNDP PROJECT GLO 92/013

CRUISE REPORTS "DR. FRIDTJOF NANSEN"

SURVEYS OF THE FISH RESOURCES OF ANGOLA

Cruise Report No 2/94

PART I

Survey of the pelagic resources 2 to 17 August 1994

PART II

Survey of the demersal resources 1 to 19 September 1994

Institute of Marine Research IMR, Bergen

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PART I

Survey of the pelagic resources 2 to 17 August 1994

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1.1 Objectives

- To map the distribution and estimate the abundance of the commercially important pelagic and semipelagic fish species in Angolan waters, north of Benguela, including the two sardinella species Sardinella aurita and S. maderensis, the Cunene horse mackerel Trachurus trecae and other pelagic species, mainly carangids.
- To estimate the biological condition of sardinella and horse mackerel, length weightrelationships and reproductive stages.
- To study the general oceanographic conditions and carry out specific hydrographic sampling in areas of highest concentrations of sardinella.
- On-the-job training for the Angolan participants on the main survey routines would be imparted, including collection and processing of raw data, the use of the acoustic system for stock assessment purposes and general methodology in oceanographic research. This aspect is emphasized in this new phase of the 'Dr. Fridtjof Nansen' programme, which aims, besides the basic resource investigations, to increase national competence in fishery and oceanographic research.

1.2 Participation

The scientific staff consisted of:

From the Institute of Fishery Research, Angola: N'Kossi Luyeye, Chores Pinto Mpungui, Fernando Gombo and David Quissungo.

From the Institute of Marine Research, Norway: Tore Strømme, Gabriella Bianchi, Helge Ullebust, Martin Dahl and Reidar Johannesen.

1.3 Narrative

The vessel left Luanda at 18h00 on 2nd August and steamed southward to Benguela where the actual survey work started on 3 August at about midday.

The survey followed a systematic triangular transect pattern, from shore to the 200 m isobath, the endpoints of the transects being approximately 10 naut.miles apart. In areas where tight sardinella shoals were recorded, surveying was conducted both during day- and nighttime. This happened in the area between Cabeça da Baleia and Lobito and north of the Congo River estuary. As in the previous survey, a 10- nautical- mile wide zone along the coast, in the region between Ambriz and the Congo River, was not covered for security reasons. The Cabinda region was only partially covered because of oil drilling activities.

The survey work was completed on August 16 and the vessel steamed to Pointe Noire (Congo).

1.4 Survey effort

Fig. 1 (a-b) 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	10	1	nm
Luanda-Beng.	14	5	nm

The total number of CTD stations were 32.

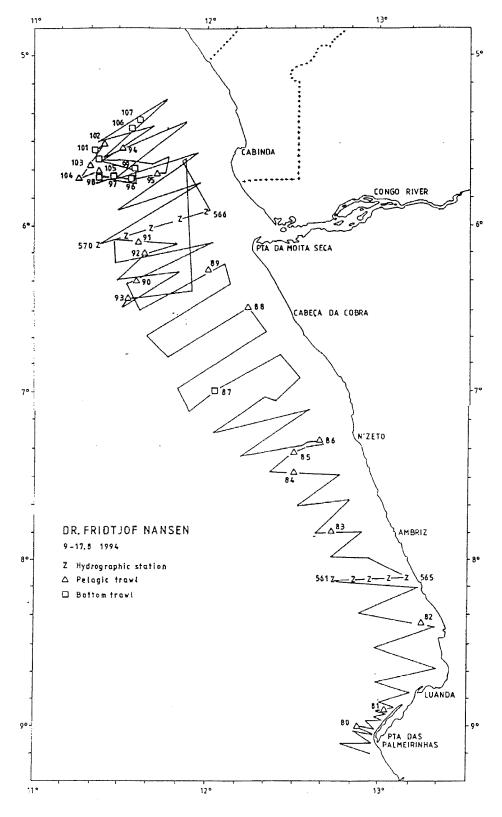


Figure 1a. Course tracks with fishing stations and hydrographic profiles, Cabinda-Luanda.

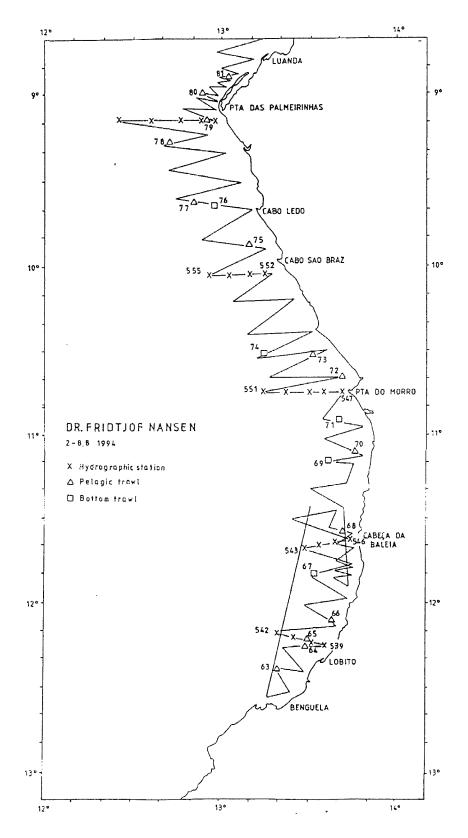


Figure 1b. Course tracks with fishing stations and hydrographic profiles, Luanda-Benguela.

2.1 Hydrographic sampling

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) for analysis of oxygen and salinity.

2.2 Fish sampling

Abundance determination

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 is 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 in the form $C_F = 1.26 \cdot 10^6 \cdot L^{-2}$ (2)

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

$$N_i = A \cdot S_A \cdot \frac{P_i}{\sum_{i=1}^{n} \frac{P_i}{C_{p_i}}}$$
(3)

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 length distribution of a given species within an area was computed by weighting the length frequencies obtained in each trawl sample within the area by the average S_A value attributed to that species in the 5 mile where the sample was taken.

In the case of cooccurrence of Sardinella aurita and S. maderensis (these species cannot be separated in the ecotraces), the respective contribution to the S_A value attributed to the 'sardinella' category was split using a factor obtained from their length frequency distributions and their CPUE in numbers. 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:

$$B = \sum_{i=1}^{H} N_i \overline{W}_i$$
 (5)

The number and biomass per length group in each concentration were at last summed to obtain the totals 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)
- Cunene horse mackerel
- anchovies
- P2 (carangids, scombrids, barracudas and hairtails)
- Brachydeuterus
- other demersal fish
- plankton

Biological sampling

Total length and body weight were recorded for sardinella and horse mackerel to the nearest ¹/₂ cm or 1 g below, respectively. Sex and reproductive stages were described by macroscopic examination, scoring each individually sampled fish according to the following categories:

- 1 Juvenile
- 2 Inactive
- 3 Active
- 4 Ripe
- 5 Running/ Spent

CHAPTER 3 HYDROGRAPHIC CONDITIONS

Figures 2 a and 2 b show the profiles derived from the hydrographic sampling in northern and central Angola respectively. Off the Congo River and Ambriz the thermocline appears to be very shallow and there is a clear uptilting of the isotherms and isolines of oxygen toward the coast. Off Ambriz very low oxygen waters ($O_2 < 1$ ml/l) were observed over the shelf and upper slope bottom. Surface temperature was about 20-21 degrees but decreased toward the coast confirming the presence of upwelling activity. During the March survey the thermocline was deeper and more pronounced, the surface temperature was at least 5 degrees higher and relatively high oxygen levels ($O_2 > 2$ ml/l) could be observed throughout the shelf.

The region off Ponta das Palmeirinhas, where schools of pelagic fish usually concentrate, also showed a more pronounced dynamics, with uptilting isolines toward the coast, shallower and less pronounced thermocline and lower temperatures throughout the water column as compared to the March survey.

In the central region four sections were sampled (Fig. 2b). These showed a clear uplifting of the water column, with lower temperatures and oxygen values from the surface to about 200 to 300 m depth. Surface salinity was higher and this possibly reflects the lower total southward transport of surface water in this period of the year. This transport is strong during the summer period, when the Angola Current can easily be identified.

The above results show a typical winter situation in Angola, with lower temperatures and clear signs of upwelling. Another description of the hydrographic regime is available for the September survey of the demersal resources.

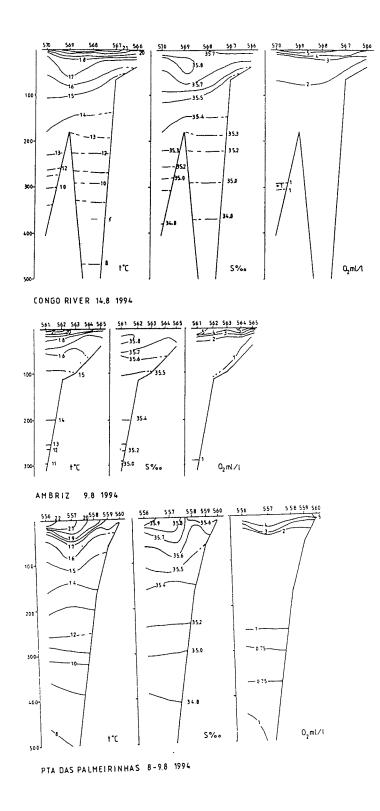
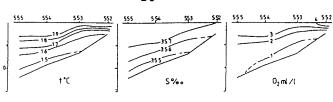
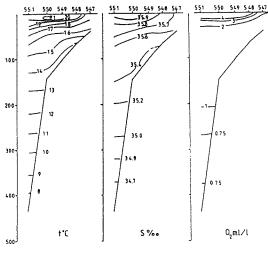


Figure 2 a. Vertical sections of temperature, salinity and oxygen, Cabinda-Ponta das Palmeirinhas



CABO SAO BRAZ 6 7.8 1994



PONTO DOMORO 5-6.8 1994

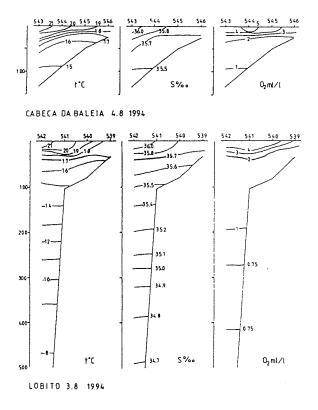


Figure 2 b. Vertical sections of temperature, salinity and oxygen, Cabo Sao Braz-Lobito

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CHAPTER 4 DISTRIBUTION, COMPOSITION AND ABUNDANCE OF PELAGIC FISH

4.1 Cabinda - Luanda

A complete coverage of the shelf was unfortunately not possible because a 10-mile distance from the coast was kept north of Ambriz, for security reasons. The coverage of the shallow waters (25-40 m) off Cabinda was also somewhat limited because of oil extraction activities. As pelagic species appeared to have a more offshore distribution than usual, the coverage was extended to beyond the 200 m isobath. In the northern region, especially in the Congo River area, the survey was extended to 600 m depth because of the incidental observation of sardinella schools well offshore.

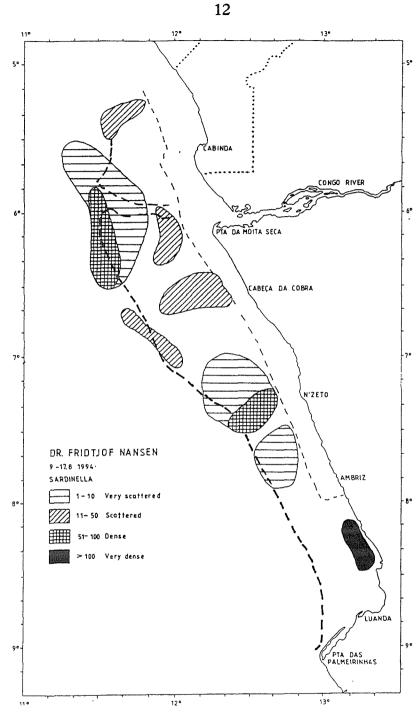
Sardinellas

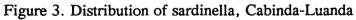
Dense sardinella schools were detected only between Luanda and Ambriz. North of Ambriz schools were more dispersed but distributed over large areas. Sardinella appeared to have a spread distribution and was surprisingly found also well offshore, to depths of about 600 metres (Figure 3). Schools occurred very close to the surface and while they could easily be detected from horizontal ranging sonar images, they hardly appeared in the echo-traces obtained with the vertical echo-sounder. There was no difficulty during this survey to catch sardinella during daytime, contrary to what had happened during the March survey. This was probably because most of the sardinella were ripe or in the spawning phase (see below) and thus easier to catch.

The length distributions show that large adults dominate for both species (Figures 4 and 5). In the case of *S. maderensis* there is a mode of about 31 cm, while for *S. aurita* the mode was 35 cm. In the March '94 survey, two modes of 24 and 31 cm respectively were found for *Sardinella maderensis*.

The biomass in this area was estimated to about 290 000 t, the proportions of flat and round sardinella were about 90 and 10 % respectively.

The estimate from the previous survey in March '94 was 100 000 tonnes. This increase in the estimate of almost 300 % may be explained by a northward migration in connection with the winter period (see below).





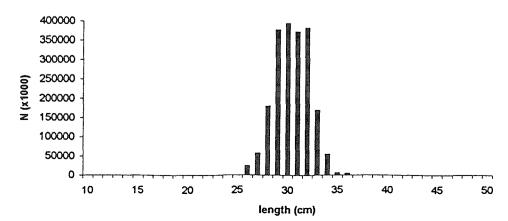


Figure 4. Total length distribution of Sardinella maderensis, Cabinda-Luanda

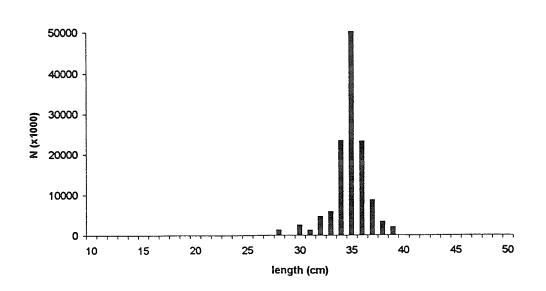


Figure 5. Total length distribution of Sardinella aurita, Cabinda-Luanda

Cunene horse mackerel

Figure 6 shows the distribution of the Cunene horse mackerel as detected by the echointegration system. Although no dense concentrations were found in this region, horse mackerel was found throughout the area, mainly over the intermediate and deeper parts of the shelf and beyond the shelf edge. Schools were observed close to the bottom, especially during daytime and in midwater and surface waters at night but this pattern was not always consistent. The catches consisted mainly of large individuals (Fig. 7), the length frequency distribution having a mode of 35 cm.

The biomass was estimated to about 120 000 tonnes. This value might represent an underestimate because the offshore limit of distribution was not reached. During the March survey almost no horse mackerel was found in this region. This pattern, as it will be shown later, may be attributed to a northward migration in the winter season.

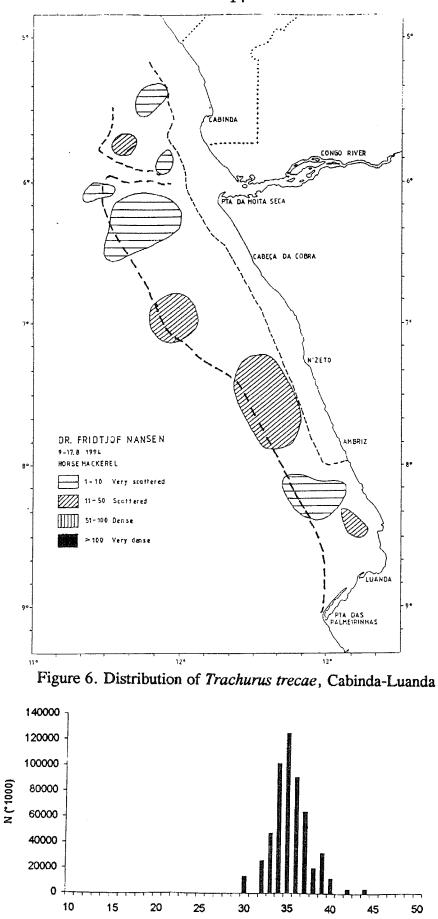


Figure 7. Total length distribution of *Trachurus trecae*, Cabinda-Luanda

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Other pelagic fishes P2

Under this category several species are included, both of shallow and deeper waters. *Trichiurus lepturus* was by far the most common species, caught throughout the shelf and over slope areas. *Brachydeuterus auritus*, *Chloroscombrus chrysurus* and *Selene dorsalis* that are usually abundant in the northern region, were caught very seldom, most probably because of the limitations in the survey coverage, that did not include 10 nm from the coast north of Ambriz. Cuttlefish (mainly *Sepiella ornata* and *Sepia officinalis*) were caught in almost all pelagic trawls, especially at the edge of the shelf. Catch rates were however low (up to 14 kg/h). The echo-integrator values attributed to the P2 group were generally low and the total biomass was calculated to 21 000 tonnes, about 60% of which consisted of *Trichiurus lepturus*. However, this is probably a gross underestimate in this region, considering the incomplete coverage of the shallow waters.

4.2 Luanda - Benguela

The shelf was covered between 20 and 200 m depth, but extended to deeper waters in correspondence with the narrowest parts of the shelf.

Sardinellas

The densest concentrations were found off Lobito and Cabeca da Baleia, more dispersed in other parts of the area. The distribution appeared to be limited to shelf waters, only in few instances appeared to go beyond the 200 m isobath (south of Ponta das Palmeirinhas). (Fig.8).

Sardinella maderensis dominated the catches. Only few individuals of Sardinella aurita were caught and no attempt was therefore made to estimate the biomass of the two species separately. The catches were dominated by large individuals, with a mode of 33 cm (Fig. 9). The length frequency pattern was similar to the one found in March '94.

The estimated biomass for this region was 245 000 tonnes. The corresponding estimate in the March '94 survey was 410 000 tonnes. The difference between the two estimates (165 000 tonnes) is comparable with the increase noticed in the northern region in this survey, thus indicating the possibility of a northward migration in connection with the upwelling season.

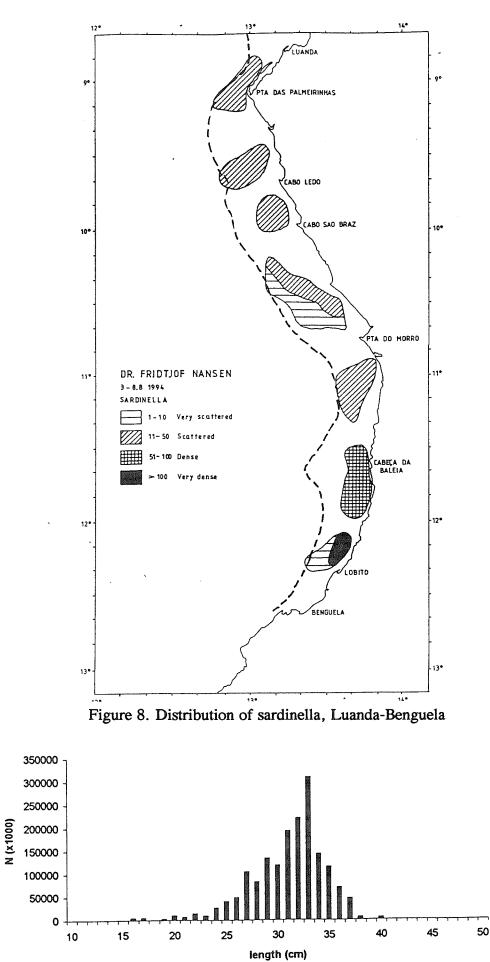


Figure 9. Total length distribution of Sardinella maderensis , Luanda-Benguela

Cunene horse mackerel

Also for this species the highest concentration was detected between Benguela and Cabeca da Baleia (Fig. 10). This species was present throughout the shelf and beyond the 200 m isobath. It is therefore possible that part of the stock was not covered as the survey design had initially been limited to the 200 m depth. Large individuals dominated the catches (25 to 45 cm). Figure 11 shows the length frequency distribution. Modes are difficult to detect, probably because of sampling defects.

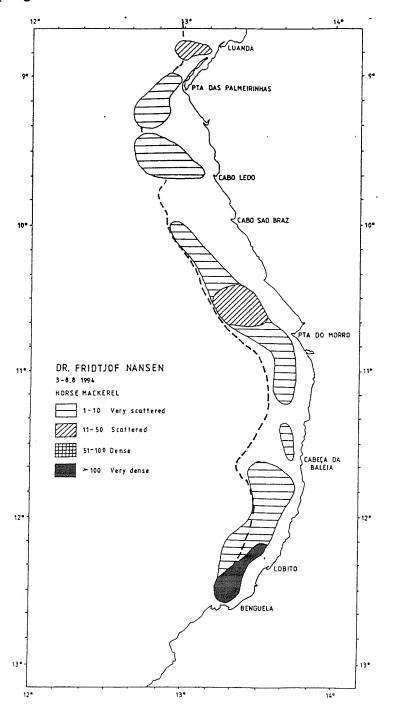


Figure 10. Distribution of Trachurus trecae, Luanda-Benguela

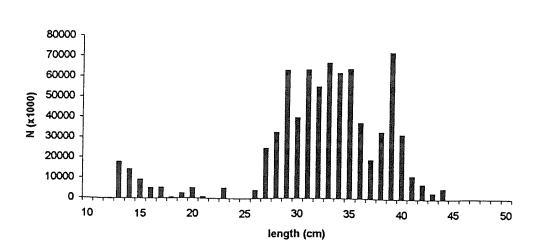


Figure 11. Total length distribution of Trachurus trecae, Luanda-Benguela

The total biomass in the area was estimated to 130 000 tonnes, while the estimate obtained in the March survey was about 240 000 tonnes. Also in this case, there is indication of a northward displacement in connection with the upwelling season, keeping in mind the biomass increase in the northern region of 130 000 tonnes.

Pelagic fish type 2 P2

The biomass was estimated to about 80 000 tonnes. Main components were Trichiurus lepturus, Chloroscombrus chrysurus and Brachydeuterus auritus.

CHAPTER 5 BIOLOGICAL SAMPLING

5. 1 Sardinella maderensis

Figure 12 (a and b) shows the results of the sampling for determining the maturity stages of this species, for the northern and central region, respectively.

In the region Luanda-Cabinda 289 specimens were sampled, with a size range of 26 to 34 cm. Almost all sardinella above 29 cm was either spawning or ready to spawn. This surprisingly was the case also for the sardinella found well offshore (over depths of 600 m or more), which was in a clear spawning stage i.e. running. It is probable that eggs, spawned in surface waters and the resulting pelagic larvae are transported by currents and possible eddies to the nursery areas closer inshore. Anon. (1980) shows for *Sardinella aurita* off Southern Gabon a spawning area over the deeper part of the shelf and upper slope.

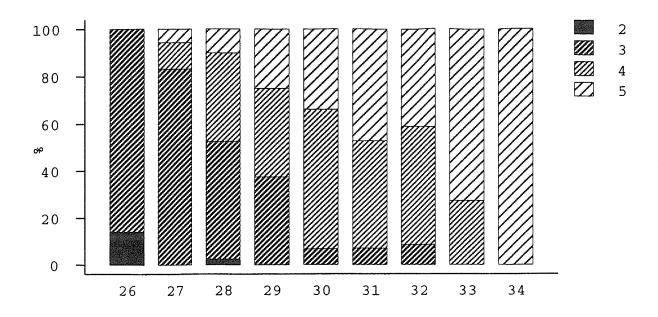
In the region Luanda-Benguela 263 specimens were sampled, with a size range of 21 to 36 cm. The situation appeared similar to the one found in the northern area, i.e. with most individuals above 29 cm either spawning or ready to spawn. In specimens below 28 cm, the gonads appeared to be totally inactive.

No study was attempted for S. aurita because it was caught more seldom and the catches consisted of a few specimens only.

5.2 Trachurus trecae

Figure 13 (a and b) shows the relative frequency of the observed maturity stages for the northern and the central region respectively.

The sampled specimens in the northern region were 119, from 31 to 45 cm. They were all ripe or under spawning. In the central region (85 individuals sampled) also small sizes were available. The range was 23 to 26 cm seemed to be critical. While up to the size of 23 cm all specimens were inactive, above 26 cm they were all ripe or under spawning. No specimen within those sizes was available in the samples.



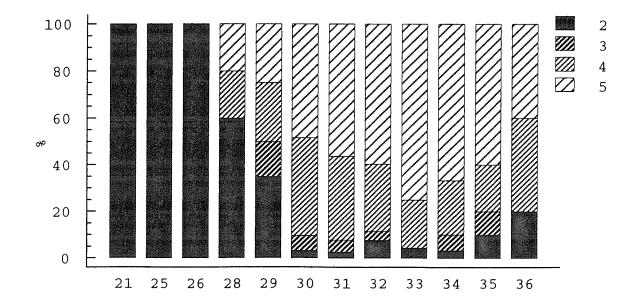


Figure 12. Maturity stages of *Sardinella maderensis* a: Cabinda-Luanda; b: Luanda-Benguela.

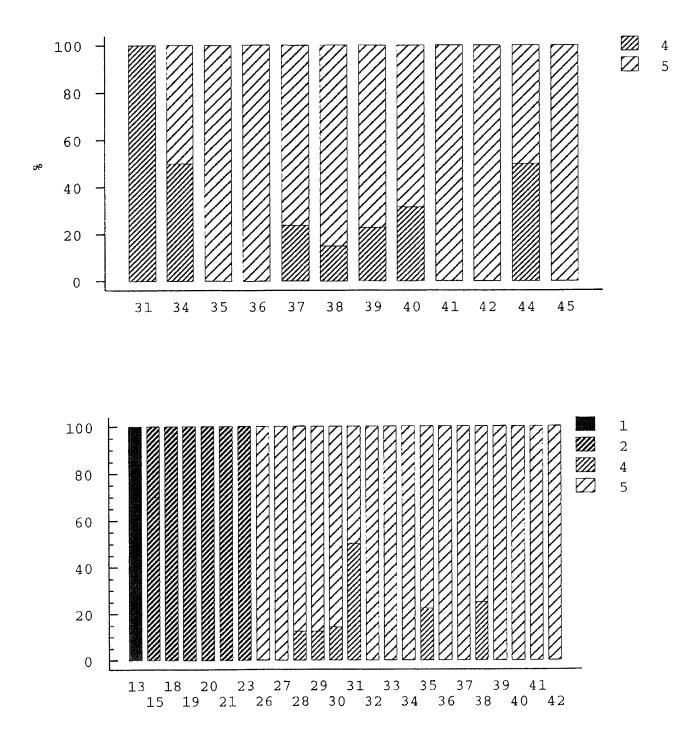


Figure 13. Maturity stages of *Trachurus trecae*: Cabinda-Luanda; b: Luanda-Benguela

Most of the pelagic species caught appeared to be sexually active indicating that the upwelling season is the most favourable for the survival and growth of the larvae. The environmental dynamics characteristic of this season possibly also ensure the transport of larvae to the nursery areas.

CHAPTER 6 OVERVIEW OF SURVEY RESULTS

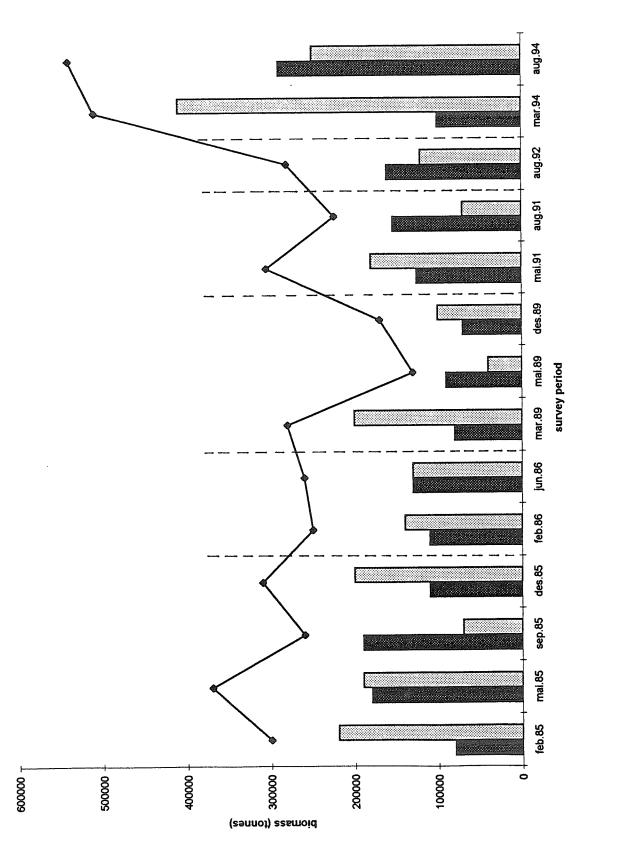
The following is an attempt to briefly review the results obtained during this survey and all previous surveys carried out by the RV 'Dr. Fridtjof Nansen' in Angola. The review will only cover sardinella and Cunene horse mackerel.

6.1 Sardinellas

* not surveyed

Figure 14 and Table 1 show the biomass estimates from the 'Dr. Fridtjof Nansen' surveys, from 1985 to 1994. Fig. 15 shows the survey estimates averaged for each year and available catch statistics from 1980 to 1990.

Table 1 Estimates of biomass of sardinellas by regions and surveys (1 000 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	本	410	100	510	510		
2/94	*	245	290	535	535		





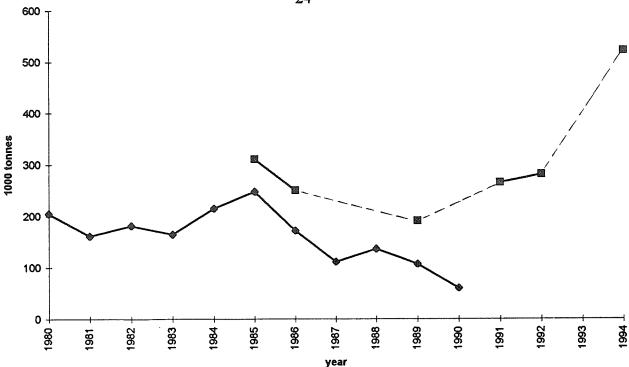


Figure 15. Fishery statistics and biomass estimates by the RV 'Dr.Fridtjof Nansen' for *Sardinella* species in Angola

As already pointed out by Anon. (1991), a clear decline in biomass may be observed in the period 1985 to 1989, from 300 000 to 200 000 tonnes. This was identified as the probable continuation of the stock decline from the early 1980s, when Soviet investigations indicated a stock with a potential annual yield of 230 000 tonnes, corresponding to a standing biomass of 600 000 tonnes. In 1989 a 50% reduction in the TAC was introduced which probably explains the slight recovery in 1991.

In recent years a consistent and considerable increase in biomass has taken place: to almost 300 000 tonnes in 1992 and over 500 000 tonnes in 1994. This could be due to the lower fishing effort exerted in later years.

Figure 16 (a and b) shows the distribution of sardinella in the summer and winter periods respectively, as observed through the surveys with the RV 'DR. Fridtjof Nansen'. The figures show clearly that in the summer period, characterized by more stratified water masses and higher temperatures in the water column, more than 50% of the biomass is found in the central region. On the contrary, the opposite is true in the winter period, characterized by upwellling and colder surface waters. This pattern is probably due to north-south migrations, that possibly apply to both species.

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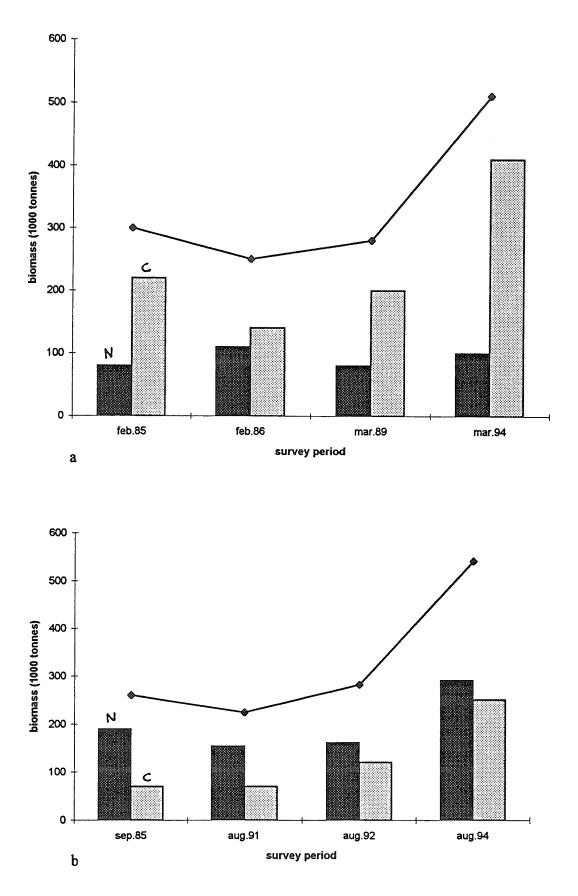


Figure 16. Survey estimates for *Sardinella* species in Central and Northern Angola. a: summer; b: winter.

It is quite remarkable that the substantial increase in biomass regards only S.maderensis, while S.aurita became more rare in the catches.

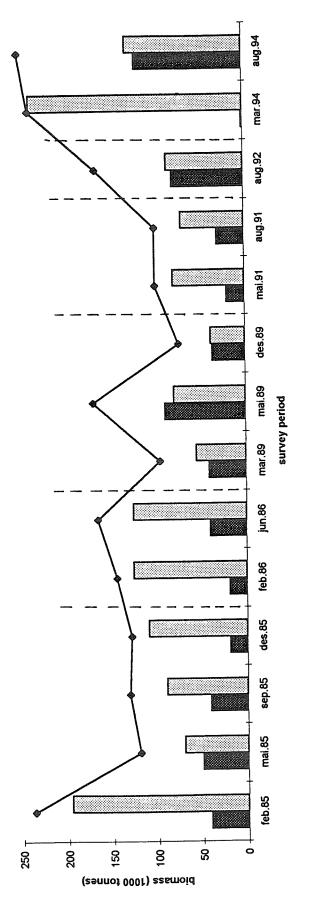
Another surprising pattern emerged from the 'Dr. Fridtjof Nansen' surveys is the lack of juveniles in the catches in later years. This had lead Anon.(1991) to be pessimistic about future recruitment. However, this pattern has continued in the 1990s, but the stock has instead increased. It is difficult to understand why the young cohorts are not any longer recorded by our surveys. On the other hand, the 1994 surveys off Congo-Gabon have shown the presence of large concentrations of juveniles in this area, where they actually dominate in numbers and biomass over the adults.

6.2 Cunene horsemackerel

Table 2 shows a summary of the survey results since 1985. In figure 17 these are plotted, including northern and central Angola. The values in figure 18 were obtained by averaging the biomass estimates in different seasons, for the same year. The pattern showed by this figure resembles the one observed for sardinella, i.e. a decrease in the standing biomass from 1985 to the end of the 1980s and a considerable recovery since the beginning of the 1990s. The reasons for this recovery might be the same as for sardinella, i.e. lower fishing pressure.

Table 2 Estimates of Cunene horsemackerel by regions and surveys (1 000 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	*	238	1	239			
2/94	* .	130	120	250			

* not surveyed





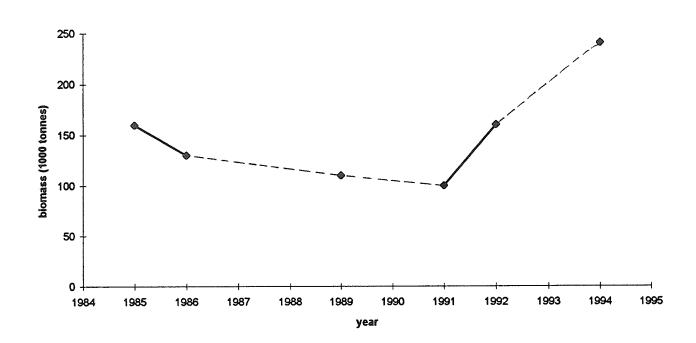


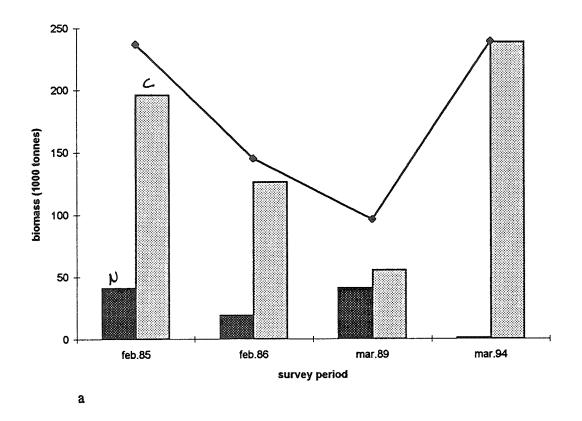
Figure 18. Survey estimates for Trachurus trecae (only northern and central regions included)

A similar pattern as for sardinella emerges pointing at a seasonal north-south migration. This is better illustrated in figure 19 (a and b), where the summer and the witer estimates for the northern and central regions are showed. Although more than 50% of the biomass is usually found in the central region, figure 19 shows that in the summer period most of horsemackerel concentrates in the central region, i.e. from Luanda to Benguela.

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Anon. (1980). Etude regionale sur la pêche maritime dans le Golfe de Guinée. Annexe N 2: La pêche maritime au Congo. Commission des communautés européennes - Fonds européens de développement

Anon. (1991). The state of Angola's main fish resources 1990-1991. (IIP, Internal document)



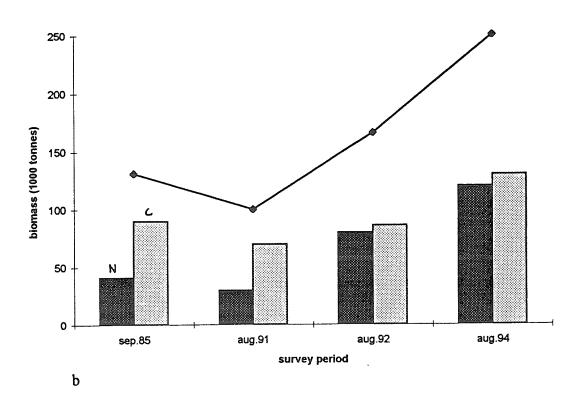


Figure 19. Survey estimates for *Trachurus trecae* in Central and Northern Angola. a: summer; b: winter.

ANNEX I Records of fishing stations

		BB0 7	ECT STATION	1: 63
DATE: 3/ 8/94 GEAR TY start stop duration	PE: PT No:		N:Lat S	1224
TIME :14:20:00 14:48:00 28 (min) Purpose	code: 1	Long E	1320
FDEPTH: 65 60		d.code: 2		
BDEPTH: 105 101 Towing dir: 177 Wire out:	Validit 250 m Spe	y code: 4 eed: 3 kn'	10	
Sorted: 29 Kg Total catch:	29.00	CATCH/I	HOUR: 6	52.14
SPECIES	CATCH/ weight	HOUR 🔪 🤇 numbers	огтот. с	SAMP
Dentex macrophthalmus SALPS	57.86 2.14	261 49	93.11 3.44	126
Boops boops Trachurus, Juveniles	1.26	9	2.03	
Total	61.26		98.58	
- Clui			,	
		PRO II	ECT STATION	i: 64
	PE: PT No:		DN:Lat S Long E	1216
start stop duration TIME :22:39:00 23:09:00 30 (min) Purpose	code: 1	Long E	1326
LOG : 708.00 709.80 1.80 FDEPTH: 15 13	Area co GearCon	d.code: l		
BDEPTH: 88 94 Towing dir: 270° Wire out:	Validit 120 m Spe	y code: 3 sed: 4 knº	•10	
Sorted: 133 Kg Total catch:	344.00	CATCH/	HOUP: 68	88.0C
SPECIES	CATCH/ weight	HOUR %	DF TOT. C	SAMP
Sardinella maderensis Trachurus trecae	599.50 60.00	1360 194	87.14 8.72	127
Trichiurus lepturus Atractoscion aequidens	17.60	60 2	2.56	
Sarda sarda Sardinella aurita	2.22	2	0.32	
Illex coindetii	0.50	24	0.07	
BREBR04 Trachurus, Juveniles	0.24	50 60	0.01	
Total	687.30		99.89	
			ECT STATION	
start stop duration	PE: PT No:		DN:Lat S Long E	1212 1330
TIME :01:59:00 02:33:00 34 (min LOG : 729.10 731.20 2.10	Area co	de :2		
FDEPTH: 20 18 BDEPTH: 88 77	GearCon Validit	d.code: 1		
	100 m Sp		•10	
Sorted: 66 Kg Total catch:	164.00	CATCH/	HOUR: 21	89.41
SPECIES	CATCH/	HOUR S	ог тот. с	SAMP
	weight	numbers		129
		605	00 03	
Trachurus trecae Sardinella maderensis	202.27	595 168	69.89 22.48	130
Sardinella maderensis Trichiurus lepturus Sepia officinalis hierredda	65.06 20.06 1.62	168 124 12	22.48 6.93 0.56	
Sardinella maderensis Trichiurus lepturus	65.06 20.06	168 124	22.48 6.93	
Sardinella maderensis Trichiurus lepturus Sepia officinalis hierredda Boops boops	65.06 20.06 1.62 0.44	168 124 12 4	22.48 6.93 0.56 0.15	
Sardinella maderensis Trichiurus lepturus Sepia officinalis hierredda Boops boops Illex coindetii	65.06 20.06 1.62 0.44 0.44	168 124 12 4	22.48 6.93 0.56 0.15 0.15	
Sardinella maderensis Trichiruns lepturus Sepia officinalis hierredda Boops boops lillex coindetii — Total —	65.06 20.06 1.62 0.44 0.44 289.89	168 124 12 4 21 PROJ	22.48 6.93 0.56 0.15 0.15 100.16 ECT STATIO	130 N: 66
Sardinella moderensis Trichiruns lepturus Sepia officinalis hierredda Boops boops illex coindetii Total	65.06 20.06 1.62 0.44 0.44 289.89	168 124 12 4 21 PROJ 1 POSITI	22.48 6.93 0.56 0.15 0.15 100.16	130 N: 66
Sardinella maderensis Trichirurs lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GEAR T start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 1.90	65.06 20.06 1.62 0.44 0.44 289.89 (PE: PT No: a) Purpose Area co	168 124 12 4 21 PROJ 1 POSITI code: 1	22.48 6.93 0.56 0.15 0.15 100.16 ECT STATION	130 N: 66 1208
Sardinella moderensis Trichirurs lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GEAR T start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 1.90 FDEPTH: 10 10 1.90 Start 10 1.90	65.06 20.06 1.62 0.44 289.89 (PE: PT No: >>) Purpose Area co GearCom Validit	168 124 12 4 21 1 PROJ 1 POSITI code: 1 de. 2 d.code: 1	22.48 6.93 0.56 0.15 100.16 ECT STATION ON:Lat S Long E	130 N: 66 1208
Sardinella maderensis Trichirurs lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GEAR T start stop duration TIME :05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 1.90 FDEFTH: 10 10 BDEFTH: 35 49 Towing dir: 350° Wire out:	65.06 20.06 1.62 0.44 289.89 (PE: PT No: a) Purpose Area co GearCon Validit 110 m Sp	168 124 12 4 21 1 POROJ 1 POROJ 1 POROJ 1 POROJ 1 POROJ 1 POROJ 1 POROJ 2 1 POROJ 2 2 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	22.48 6.93 0.56 0.15 100.16 100.16 ECT STATION ON:Lat S Long E	130 N: 66 1208 1338
Sardinella moderensis Trichirurs lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GEAR T start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 1.90 FDEPTH: 10 10 1.90 Start 10 1.90	65.06 20.06 1.62 0.44 289.89 (PE: PT No: a) Purpose Area co GearCon Validit 110 m Sp	168 124 12 4 21 1 POROJ 1 POROJ 1 POROJ 1 POROJ 1 POROJ 1 POROJ 1 POROJ 2 1 POROJ 2 2 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 1 POROJ 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	22.48 6.93 0.56 0.15 100.16 100.16 ECT STATION ON:Lat S Long E	130 N: 66 1208
Sardinella maderensis Trichirurs lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GEAR T start stop duration TIME :05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 1.90 FDEFTH: 10 10 BDEFTH: 35 49 Towing dir: 350° Wire out:	65.06 20.06 1.62 0.44 0.44 289.89 (PE: PT No: 289.89 (PE: PT No: 3) Purpose Area co GearCom Validit 110 m Sp 3175.00 CATCH/	168 124 12 4 21 PROJ 1 POSITI code: 1 de: 2 d.code: 1 ged: 4 kn CATCH/ HOUR	22.48 6.93 0.56 0.15 100.16 ION.16 ECT STATION ON:Lat S Long E	130 N: 66 1208 1338
Sardinella maderensis Trichiruns lepturus Sepia officinalis hierredda Boogs boops illex coindetli Total DATE: 4/ 8/94 GEAR TT start stop duration TIME :06:58:00 07:22:00 24 (min ILOG : 764.20 07:22:00 PDEPTR: 1 1 1 BDEPTR: 15 49 TOFFR: 150 Wire out: Sorted: 169 Kg Total catch:	65.06 20.06 1.62 0.44 289.89 (PE: PT No: 289.89 (PE: PT No: 289.89 (PE: PT No: 3175.00 CATCH/ weight 7580.00	i68 124 12 12 21 PROJ TI code: 1 dec: 2 d.code: 1 dec: 2 d.code: 1 y code: 3 sed: 4 kn CATCH/ HOUR HOUR Z5515	22.48 6.93 0.56 0.15 100.16 ECT STATION ON:Lat S Long E +10 HOUR: 79	130 N: 66 1208 1338
Sardinella maderensis Trichiruns lepturus Boops boops lillex coindetli Total DATE: 4/ 8/94 GEAR TT start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir POEPTH: 10 10 BDEFTH: 10 10 BDEFTH: 356 Wire out: Sorted: 169 Kg Total catch: SPECIES	65.06 20.06 1.62 0.44 289.89 (PE: PT No:) Purpose Area co GearCon Validit 110 m Sp 3175.00 CATCH/ weight 7580.00 280.00	168 124 12 4 21 PROJJ 1 POSIJ 1 POSIJ 1 POSIJ 1 POSIJ 20de: 1 de: 2 d.code: 1 de: 2 d.code: 4 kn CATCH/ HOUR \	22.48 6.93 0.56 0.15 100.16 ECT STATION ON:Lat S Long E *10 HOUR: 79: OF TOT. C	130 N: 66 1208 1338 37.50 SAMP
Sardinella maderensis Trichiurus lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GER T Total DATE: 4/ 8/94 GER T Total DATE: 4/ 8/94 GER T Total DATE: 4/ 8/94 GER T Start stop duration TIME :06:38:00 07:22:00 24 (mur LOG 764:10 766:10 1.90 PDEPTH: 55 49 Total catch: Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sardinella aurita Trachurus trecee Sarda sarda	65.06 20.06 1.62 0.44 289.89 (PE: PT No: 	168 124 12 4 21 PROJ 1 PROJ 1 POSITI code: 1 de : 2 d.code: 1 de : 2 d.code: 1 v code: 3 seed: 4 kn CATCH/ HOUR CATCH/ HOUR S	22.48 6.93 0.56 0.15 100.16 ECT STATION CN:Lat S Long E +10 HOUR: 79: OF TOT. C 95.50 3.28 0.54	130 N: 66 1208 1338 37.50 SAMP 131
Sardinella maderensis Trichiurus lepturus Sepia officinalis hierredda Boogs boops illex coindetii Total DATE: 4/ 8/94 GEAR TY DATE: 4/ 8/94 GEAR TY Total DATE: 4/ 8/94 GEAR TY Secure duration TLME :06:55:00 07:22:00 24 (mir LOG : 764:20 766:10 1.90 TDEPTH: 10 766:10 1.90 TDEPTH: 15 40 TOEPTH: 35 40 Towing dir: 350° Wire out: Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sardinella aurita Trachurus trecae	65.06 20.06 1.62 0.44 289.89 (PE: PT No: 5) Purpose Area co GearCon Validit 110 m Sp 3)75.00 CATCH/ Weight 7580.00 260.00 54.25	168 124 12 4 21 1 POSITI code: 1 de 2 2 4 21 1 POSITI code: 1 de 2 2 4 code: 1 de 2 2 4 code: 1 de 2 2 5 15 8 15 8 15 8 15 8 15 8 15 15 12 12 12 12 12 12 12 12 12 12 12 12 12	22.48 6.93 0.56 0.15 100.16 ECT STATION ON:Lat S Long E +10 HOUR: 79: 0F TOT. C 95.50 3.28 0.28	130 N: 66 1208 1338 37.50 SAMP 131
Sardinella maderensis Trichiurus lepturus Sepia officinalis hierredda Boops boops illex coindetii Total DATE: 4/ 8/94 GER T Total DATE: 4/ 8/94 GER T Total DATE: 4/ 8/94 GER T Total DATE: 4/ 8/94 GER T Start stop duration TIME :06:38:00 07:22:00 24 (mur LOG 764:10 766:10 1.90 PDEPTH: 55 49 Total catch: Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sardinella aurita Trachurus trecee Sarda sarda	65.06 20.06 1.62 0.44 289.89 (PE: PT No: 	168 124 12 4 21 1 POSITI code: 1 de 2 2 4 21 1 POSITI code: 1 de 2 2 4 code: 1 de 2 2 4 code: 1 de 2 2 5 15 8 15 8 15 8 15 8 15 8 15 15 12 12 12 12 12 12 12 12 12 12 12 12 12	22.48 6.93 0.56 0.15 100.16 ECT STATION CN:Lat S Long E +10 HOUR: 79: OF TOT. C 95.50 3.28 0.54	130 N: 66 1208 1338 37.50 SAMP 131
Sardinella maderensis Trichirura lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GENR T start stop duration TIME :06:58:00 07:22:00 24 (min LOG : 764.20 07:22:00 24 (min DOFFR: 10 10 PDEPTR: 10 10 PDEPTR: 15 49 Towing dir: 350° Wire out: Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sardinella aurita Trachurus trecae Sarda sarda Total	65.06 20.06 1.62 0.44 289.89 (PE: PT No: 289.89 (PE: PT No: 4780.00 200.02 CATCH/ Weight 7580.00 260.02 54.25 7937.50	168 124 12 4 21 1 PROJ 1 POSITI code: 1 4 code: 1 4 code: 4 4 code: 4 4 code: 4 kn cATCH/ HOUR A kn cATCH/ HOUR 25515 25 25	22.48 6.93 0.56 0.15 100.16 ECT STATION N:Lat S Long E +10 HOUR: 79: OF TOT. C 95.50 3.28 0.54 100.00 ECT STATION	N: 66 1208 1338 37.50 SAMP 131 132 N: 67
Sardinella maderensis Trichiurus lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GEAR T Start stop duration TIME :05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir DOFTH: 10 10 1.90 FDEFTH: 10 10 1.90 FDEFTH: 10 5.49 Towing dir: 350* Wire out: Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella surita Trachurus trecae Sarda sarda Total DATE: 4/ 8/94 GEAR T	65.06 20.06 1.62 0.44 289.89 (PE: PT No: 	168 124 12 4 21 1 POSITI code: 1 4 21 2 1 POSITI 8 0 2 5 1 POSITI 8 1 POSITI	22.48 6.93 0.56 0.15 100.16 ECT STATION CN:Lat S Long E +10 HOUR: 79: OF TOT. C 95.50 3.28 0.54 100.00	N: 66 1208 1338 37.50 SAMP 131 132 N: 67
Sardinella maderensis Trichiurus lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GEAR T Sardinella maderensis Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella matta Trachurus trecae Sardinella surita Trachurus (recae) Sardinella surita Trachurus (recae) Sardinella surita Trachurus (recae) Sardinella (recae)	65.06 20.06 1.62 0.44 0.44 289.89 (PE: PT No:) Purpose Area co CearCon Validit 110 m Sp 3175.00 CATCH/ Weight 7580.00 260.00 24.25 43.25 7937.50 (PE: BT No:) Purpose Area co 43.25 7937.50	168 124 124 4 21 1 POSITI code: 1 4 code: 1 4 code: 4 2 d.code: 1 ycode: 3 sed: 4 kn CATCH/ HOUR R S5515 815 90 25 1 PEOJITI code: 1 d.code: 1 d.code: 1 d.code: 2 d.code: 1 code: 2 d.code: 1 d.code: 1 d.co	22.48 6.93 0.56 0.15 100.16 ECT STATION N:Lat S Long E +10 HOUR: 79: OF TOT. C 95.50 3.28 0.54 100.00 ECT STATION	130 1206 1208 1338 37.50 SAMP 131 132 N: 67
Sardinella maderensis Trichiurus lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GEAR T DATE: 4/ 8/94 GEAR T DATE: 05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 766.10 1.90 FDEFTH: 10 10 1.90 FDEFTH: 15 49 Towing dir: 350* Wire out: Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella surita Trachurus trecae Sarda sarda Total DATE: 4/ 8/94 GEAR T DATE: 12:27:30 12:47:00 20 (mir LOG : 811.60 12:60 1.00 FDEFTH: 122 127	65.06 20.06 1.62 0.44 289.89 (PE: PT No:) Purpose (PE: PT No:) Purpose 3) Purpose 3) 7580.00 CATCH/ weight 7580.00 26.25 27.50 26.00 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 26.00 26.25 27.50 27.5	168 124 124 12 4 21 PROJ PROJ PROJ PROJ PROJ CODE: 1 de: 2 25515 90 25 PROJ PROJ PROJ 1 PROJ 2 S 1 PROJ 2 S 1 PROJ 2 S 1 PROJ 2 S 1 PROJ 2 S 1 PROJ 2 S 1 PROJ 1 PROJ 1 PROJ 1 PROJ 1 PROJ 1 PROJ 1 PROJ 1 PROJ 2 S S PROJ 1 PROJ PROJ 1 PROJ	22.48 6.93 0.56 0.15 100.16 ECT STATION NON:LAL S Long E +10 HOUR: 79: OF TOT. C 95.50 3.28 0.54 100.00 ECT STATION ECT STATION NO.124 S Long E	130 1206 1208 1338 37.50 SAMP 131 132 N: 67
Sardinella maderensis Trichiurus lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GEAR T Start stop duration TIME :05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir DATE: 10 10 1.90 DEPTH: 10 10 1.90 DEPTH: 10 10 1.90 Towing dir: 350* Wire out: Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella matta Trachurus trecae Sarda sarda Total DATE: 4/ 8/94 GEAR T DATE: 4/ 8/94 GEAR T DATE: 12:71:00 12:47:00 20 (mir LOG : 811.60 12:60 1.00 FDEPTH: 127 127 Towing dir: 180* Wire out:	65.06 20.06 1.62 0.44 289.89 (PE: PT No:) Purpose (PE: PT No:) Purpose 110 m Sp 115.00 CATCH/ weight 7580.00 26.25 27.35 27.50 26.00 26.00 26.00 26.00 26.25 27.50 26.00 26.	168 124 124 12 4 21 PROJ POSITI code: 1 4 code: 1 4 code: 4 Numbers 25515 90 25 PROJ POSITI code: 1 4 Numbers 25515 90 25 25 25 25 25 25 25 25 25 25	22.48 6.93 0.56 0.15 100.16 ECT STATION NON:LAL S Long E *10 HOUR: 79. OF TOT. C 95.50 3.28 0.54 100.00 ECT STATION ECT STATION N:LAL S Long E *10	130 130 1208 1338 37.50 5АМР 131 132 N; 67 150 1332
Sardinella maderensis Trichiurus lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GEAR T DATE: 4/ 8/94 GEAR T DATE: 05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 766.10 1.90 FDEFTH: 10 10 1.90 FDEFTH: 15 49 Towing dir: 350* Wire out: Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella surita Trachurus trecae Sarda sarda Total DATE: 4/ 8/94 GEAR T DATE: 12:27:30 12:47:00 20 (mir LOG : 811.60 12:60 1.00 FDEFTH: 122 127	65.06 20.06 1.62 0.44 289.89 (PE: PT No:) Purpose Area co GearCon Validit 110 m Sp 3175.00 CATCH/ Weight 7580.00 260.00 261.00 260.00 261.00 262.00 263.25 43.25 7937.50 (PE: BT No:) Purpose Area co GearCon Validit 150 m Sp	168 124 124 12 4 21 PROJ POSITI code: 1 4 code: 1 4 code: 4 Numbers 25515 90 25 PROJ POSITI code: 1 4 Numbers 25515 90 25 25 25 25 25 25 25 25 25 25	22.48 6.93 0.56 0.15 100.16 ECT STATION NON:LAL S Long E *10 HOUR: 79. OF TOT. C 95.50 3.28 0.54 100.00 ECT STATION ECT STATION N:LAL S Long E *10	N: 66 1208 1338 37.50 SAMP 131 132 N: 67
Sardinella maderensis Trichiurus lepturus Boops boops 111ex coindetii Total DATE: 4/ 8/94 GEAR T Start stop duration TIME :05:58:00 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir LOG : 764.20 07:22:00 24 (mir DATE: 10 10 1.90 DEPTH: 10 10 1.90 DEPTH: 10 10 1.90 Towing dir: 350* Wire out: Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella maderensis Sardinella matta Trachurus trecae Sarda sarda Total DATE: 4/ 8/94 GEAR T DATE: 4/ 8/94 GEAR T DATE: 12:71:00 12:47:00 20 (mir LOG : 811.60 12:60 1.00 FDEPTH: 127 127 Towing dir: 180* Wire out:	65.06 20.06 1.62 0.44 0.44 289.89 (PE: PT No: 1) Purpose Area co GearCon Validit 110 m Sp 3175.00 54.25 7937.50 (PE: BT No: 1) Purpose Area co GearCon 54.25 7937.50 (PE: BT No: 20.00	168 124 124 124 12 12 12 12 12 12 12 12 12 12	22.48 6.93 0.56 0.15 100.16 ECT STATION NON:LAL S Long E *10 HOUR: 79. OF TOT. C 95.50 3.28 0.54 100.00 ECT STATION ECT STATION N:LAL S Long E *10	130 130 1208 1338 37.50 5АМР 131 132 N; 67 150 1332
Sardinella maderensis Trichirura lepturus Boops boops Illex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 766.10 1.90 FDEFTR: 10 10 BDEFTR: 10 10 BDEFTR: 10 10 Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sardinella maderensis Sardinella aurita Trotal DATE: 4/ 8/94 GEAR TI start stop duration TIME :12:27:00 12:47:00 20 (mir LOG : 811.60 812.60 1.00 FDEFTR: 127 127 BDEFTR: 127 127 BDEFTR: 127 127 BDEFTR: 127 127 BDEFTR: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex macrophthalmus	65.06 20.06 1.62 20.44 289.89 (PE: PT No:) Purpose Area co GearCon Validit 110 m Sp 3175.00 54.25 7937.50 (PE: BT No:) Purpose Area co GearCon Validit 7580.00 240.25 7937.50 (PE: BT No:) Purpose Area co GearCon Validit 10 m Sp 57937.50 (PE: BT No:) Purpose Area co GearCon Validit 11 Jungose Area co 11 Jungose 11	168 124 124 124 4 21 PROJ POSITI code: 1 de: 2 d.code: 1 y code: 3 sed: 4 kn CATCH/ HOUR * PROJ PROJ PROJ PROJ 1 POSITI code: 1 de: 2 d.code: 8 90 25 PROJ 1 POSITI code: 1 de: 2 d.code: 8 90 25 PROJ 1 POSITI code: 1 de: 2 4 kn code: 1 4 kn code: 1 code: 2 code: 3 code: 2 code: 3 code: 2 code: 3 code: 2 code: 2 code: 3 code: 2 code: 3 code: 2 code: 2 code: 3 code: 2 code: 3 code: 3 code: 4 code: 4 code	22.48 6.93 0.56 0.15 0.15 100.16 ECT STATIO CN:Lat S Long E *10 HOUR: 79: OF TOT. C 95.50 3.28 0.68 0.54 100.00 ECT STATION N:Lat S Long E *10 HOUR: 21: OF TOT. C 67.99	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Bepia officinalis hierreda Boogs boops 111ex coindetii Total DATE: 4/ 8/94 GEAR TT start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 766.10 1.90 PDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 35 49 Towing dir: 350 Wire out: Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sarda ella aurita Trathurus trecae Sarda ella aurita Total DATE: 4/ 8/94 GEAR TT start stop duration TIME :12:27:00 12:47:00 20 (mir LOG : 811.60 812.60 1.00 PDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex macrophthalmus Trachurus trecae SPECIES	65.06 20.06 1.62 20.44 289.89 (FE: PT No:) Purpose Area co GearCon validit 110 m Sp 3175.00 280.00 24.25 7937.50 (FE: BT No:) Purpose Area co GearCon validit 280.00 54.25 7937.50 (FE: BT No:) Purpose Area co GearCon validit 1443.75 511.75 75.55 1.75 75.75	168 124 124 12 4 21 PB0J1 POSITI code: 1 de: 2 d.code: 1 g.vcode: 3 ed: 4 kn CATCH/ HOUR PE0J POSITI code: 4 kn CATCH/ HOUR PE0J POSITI code: 2 g.vcode: 3 ed: 4 kn CATCH/ HOUR CATCH/ HOUR Numbers 22515 2215 2215 2215 2215 2215 2215 22	22.48 6.93 6.93 0.56 0.15 100.16 ECT STATIO N:Lat S Long E *10 HOUR: 79: 0F TOT. C 95.50 3.28 0.68 0.54 100.00 ECT STATION N:Lat S Long E *10 HOUR: 21: 0F TOT. C 67.99 25.04 3.55 *10 *10	130 130 1206 1338 1338 1337 130 1337 132 1312 1322 23.40 SAMP
Sardinella maderensis Trichirura lepturus Bepia officinalis hierreda Boogs boops 111ex coindetii Total DATE: 4/ 8/94 GEAR TN Start stop duration TIME :06:58:00 07:22:00 24 (mir LGG : 764.20 766.10 1.90 PDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 35 49 Towing dir: 350 Wire out: Sorted: 169 Kg Total catch: SPECIES DATE: 4/ 8/94 GEAR TN SATA start stop duration TIME :12:27:00 12:47:00 20 (mir LGG : 811.60 812.60 1.00 PDEPTH: 127 127 BDEPTH: 127 127 B	65.06 20.06 20.06 1.62 0.44 289.89 (FE: PT No:) Purpose Area co GearCon validit 110 m Sp : 3175.00 CATCH/ Weight PURPOSE 7937.50 (FE: BT No:) Purpose Area co GearCon validit 310 51.75 51.75 14.70 1.80 (Area co CATCH/ Weight CATCH/ States co Catches	168 124 124 12 4 12 4 21 PB0J1 POSITI code: 1 de: 2 d.code: 1 gv code: 3 ed: 4 kn CATCH/ HOUR PR0J POSITI code: 4 kn CATCH/ HOUR Numbers 25515 815 90 25 PR0J POSIT1 code: 2 d.code: 8 y code: 3 ed: 4 kn CATCH/ HOUR NUBPERS 15 15 15 15 15 15 15 15 15 15 15 15 15	22.48 6.93 0.56 0.15 100.16 ECT STATION NUR: 79: of TOT. C 95.50 3.28 0.68 0.54 100.00 ECT STATION N:Lat S Long E *10 NON:Lat S 0.68 0.54 100.00 ECT STATION N:Lat S 0.68 0.54 0.55	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Bepia officinalis hierreda Boogs boops illex coindetii Total DATE: 4/ 8/94 GEAR T start stop duration TIME :06:58:00 07:22:00 24 (min LOG : 764.20 07:22:00 24 (min DOF 764.20 07:22:00 24 (min DOF 764.20 07:22:00 24 (min DOF 764.20 07:22:00 24 (min DOF 764.20 07:22:00 24 (min LOG : 764.20 07:22:00 24 (min DOF 764.20 07:22:00 24 (min SOFTES Sardinella maderensis Sardinella maderensis Sorted: 169 Kg Total catch: SPECIES Dentex marcophthalmus Trachurus trecae Dentex angolensis Torpedo sp. Scorpaena stephanica Seconda cataphractum	65.06 20.06 1.62 20.44 20.44 289.89 (PE: PT No:) Purpose Area co CearCon Validit 110 m Sp : 175.00 CATCH/ wight 7580.00 24.25 43.25 7937.50 (PE: BT No:) Purpose Area co CearCon Validit 350 m Sp : 707.80 CATCH/ Weight 1350 m Sp : 707.80 CATCH/ Weight 141.75 511.75 511.75 75.75 14.70 13.80 7.65	168 124 124 12 4 21 PROJ POSITI code: 1 de: 2 d.code: 1 de: 2 d.code: 1 de: 2 d.code: 4 NUR ROJ PROJ	22.48 6.93 0.56 0.15 100.16 ECT STATIO N:Lat S Long E *10 HOUR: 79 OF TOT. C 95.50 3.28 0.68 0.68 0.68 0.68 100.10 HOUR: 21: OF TOT. 21: OF TOT. 21: OF TOT. 21: 0.68 0.69 0.69 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.65 0.75 0.75 0.75 0.65 0.75 0.75 0.75 0.75 0.75 0.65 0.75 0.75 0.75 0.65 0.7	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Bepia officinalis hierreda Boogs boops illex coindetil Total DATE: 4/ 8/94 GEAR T start stop duration TIME :06:58:00 07:22:00 24 (min LOG : 764.20 07:22:00 24 (min DOF 764.20 07:22:00 24 (min SPECIES Sardinella maderensis Gardinella maderensis Sorted: 169 Kg Total catch: SPECIES Dentex macrophthalmus Trachurus trecae Dentex angolensis Sortens stephanica Spicara alta	65.06 65.06 1.62 0.44 0.44 289.89 (PE: PT No: 1) Purpose Areacon CATCH/ velidit 110 m Sp 3175.00 CATCH/ velidit 110 m Sp 3175.00 CATCH/ velidit 110 m Sp 3175.00 CATCH/ velidit 110 m Sp 3175.00 CATCH/ velidit 130 m Sp 54.25 7937.50 7937.50 CATCH/ velidit 150 m Sp 707.80 CATCH/ velidit 150 m Sp 707.80 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00,00 CATCH/ 75,00 75,00 CATCH/ 75,000 CATCH/ 75,000 CATCH/ 75,000 CATCH/ 75,000 CATCH/ 75,000 CATCH	168 124 124 124 12 4 21 1 PROJ 1 POSITI code: 1 de: 2 d.code: 1 de: 2 d.code: 4 knumbere 25515 90 255 1 PROJ 255 1 PROJ 255 1 PROJ 255 1 S 255 1 S 255 255 255 255 255 255 255 25	22.48 6.93 0.56 0.15 100.16 ECT STATION NUR: 79: of TOT. C 95.50 3.28 0.68 0.54 100.00 ECT STATION N:Lat S Long E *10 NON:Lat S 0.68 0.54 100.00 ECT STATION N:Lat S 0.68 0.54 0.55	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirurs lepturus Boops boops illex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (mir LOG : 764.20 766.10 1.90 PDEPTH: 15 49 Towing dir: 350° Wire out: Sorted: 169 kg Total catch: SPECIES Sardinella maderensis Sards ards Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :12:27:00 12:47:00 20 (mir LOG : 611.66 112.66 1.00 PDEPTH: 12 127 Towing dir: 180° Wire out: Sorted: 142 kg Total catch: SPECIES Dentex macrophthalmus Trachurus trecae Species Dentex macrophthalmus Trachurus trecae Dentex anglensis Toring dir: 180° Wire out: Sorted: 142 kg Total catch: SPECIES	65.06 65.06 1.62 20.06 1.62 0.44 289.89 (PE: PT No: 1) Purpose Area Co. Carcel, veitait 110 m Sp 3175.00 260.00 24.25 7937.50 7937.50 (PE: BT No: 1) Purpose Area Co. Carcel, veitait 350 m Sp 707.80 CATCH, veitait 350 m Sp 707.80 CATCH, 43.25 51.75 51	168 124 12 4 21 1 PROJ 1 POSITI code: 1 4 21 1 POSITI code: 1 4 4 21 21 21 21 21 21 21 21 21 21	22.48 6.93 0.56 0.15 100.16 ECT STATIO ON:Lat S Long E *10 HOUR: 79: OF TOT. C 95.50 3.28 0.54 100.00 ECT STATIO N:Lat S Long E *10 HOUR: 21: OF TOT. C 67.99 25.04 .57 0.58 0.54 .57 0.58 0.54 .57 0.58 0.54 .57 0.58 0.54 .57 0.58 0.54 .57 0.58 0.54 .57 0.58 0.54 .57 0.58 0.54 .57 .57 .57 .57 .57 .57 .57 .57	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Sepia officinalis hierreda Boogs boops illex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (min TOT 764.20 766.10 1.90 PDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sardiaella aurita Trotal DATE: 4/ 8/94 GEAR TI start stop duration TIME :12:27:00 12:47:00 20 (min LOG : 811.60 812.60 1.00 PDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex macjoensis Trachurus trecae Dentex anglensis Tortal catch: SPECIES	65.06 65.06 1.62 20.06 1.62 0.44 289.89 (PE: PT No: 1) Purpose Area co Garcati 110 m Sp 3175.00 260.00 24.25 43.25 7937.50 (PE: BT No: 1) Purpose Area co Garcati 10, 10 54.25 7937.50 (PE: BT No: 1) Purpose Area co Garcati 10, 10 54.25 53.155 1, 55 53.135 144.30 144.30 144.30 5, 55 4.55 5.55	168 124 124 124 12 1 PROJ 1 POSITI code: 1 d. code: 1 d. code: 1 d. code: 4 NUR CATCH/ HOUR CATCH/ HOUR SITI code: 25515 90 255 1 PROJ 25515 90 255 1 CATCH/ HOUR CATCH/ HOUR CATCH/ NUR CATCH/ HOUR SITI code: 1 4 NUR CATCH/ HOUR SITI code: 1 30 255 1 Solution Site 1 Solution Sit	22.48 6.93 0.56 0.15 100.16 ECT STATIO ONFLAL S Long E *10 HOUR: 79: OF TOT. C 95.50 3.28 0.54 100.00 ECT STATIO NUR: 21: OF TOT. C 67.99 25.04 1.57 0.57 0.57 0.58 0.54 *10 HOUR: 21: 0.57 0.59 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.59 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.57 0.59 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.59 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.59 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.59 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.59 0.56 0.56 0.56 0.28 0.54 *10 HOUR: 21: 0.57 0.57 0.57 0.57 0.57 0.58 0.54 *10 HOUR: 21: 0.57 0.57 0.57 0.57 0.57 0.58 0.54 *10 HOUR: 21: 0.57 0.57 0.57 0.57 0.57 0.58 0.54 *10 HOUR: 21: 0.57 0.5	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Sepia officinalis hierreda Boogs boops illex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (mir LGG : 764.20 766.10 1.90 FDEFTR: 10 10 BDEFTR: 10 10 BDEFTR: 10 10 Sorted: 169 Kg Total catch: Sectors Sardinella maderensis Sardinella aurita Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :12:27:00 12:47:00 20 (mir LGG : 811.60 812.60 1.00 FDEFTR: 127 127 BDEFTR: 127 127 BDEFTR: 127 127 BDEFTR: 127 127 BDEFTR: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex macrophthalmus Trachurus trecae Dentex anglennis Toptang dir: 180 ⁻ Wire out: Sorted: 142 Kg Total catch: SPECIES	65.06 52.06 1.62 0.44 289.89 (FE: PT No: Purpose Area co GearCon Validit 110 m Sp 3175.00 54.25 7937.50 (FE: BT No: 1) Purpose Area co GearCon 54.25 7937.50 (FE: BT No: 1) Purpose Area co GearCon 54.25 51.75 51.75 51.75 144.3.75 51.75 53.13 1.30 7.55 5.55 1.30 2.55 2.255 2.55 2.255 2.	168 124 124 12 4 12 4 21 PROJ 1 POSITI code: 1 de: 2 d.code: 1 y code: 3 ed: 4 NOUR Numbers 25515 815 815 90 25 PROJ 1 POSITI code: 1 de: 2 d.code: 8 y code: 3 ed: 3 ed: 240 NOUR NUMBERS 1008 2235 240 15 15 15 15 15 15 15 15 15 15 15 15 15	22.48 6.93 6.93 0.56 0.15 100.16 ECT STATIO N:Lat S Long E *10 HOUR: 79: OF TOT. C 95.50 3.28 0.68 0.54 100.00 ECT STATION N:Lat S Long E *10 HOUR: 21: OF TOT. C 67.99 25.04 3.57 0.65 0.65 0.65 0.26 0.54 0.54 100.10 ECT STATION HOUR: 21: OF TOT. C 67.99 25.04 3.56 0.65 0.54 0.54 0.54 0.55 0.	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Sepia officinalis hierreda Boogs boops 111ex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (mir LGG : 764.20 766.10 1.90 PDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 50 Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sarda ella aurita Trachurus trecae Sarda ella aurita Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :12:27:00 12:47:00 20 (mir LGG : 811.60 812.60 1.00 PDEPTH: 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex maylematica Frachurus trecae Dentex angolensis Toreling dir: 180 ^o Wire out: Sorted: 142 Kg Total catch: SPECIES Dentex maylematica Peristedion cataphractum Pontinus acreaenis Spicara alta Zeus faber Chelidonichthys gabonenis Lepidotrigla codmani Aulopus cadenati	65.06 65.06 1.62 20.06 1.62 0.44 289.89 (PE: PT No: 1) Purpose Area co GearCon Validit 110 m Sp 3175.00 54.25 43.25 7937.50 (PE: BT No: 1) Purpose Area co GearCon Validit 3580.00 24.25 43.25 7937.50 CATCH/ Weight 1443.75 51.75 5.85 5.85 5.35 4.36 2.55 5.25 2.25 2.25 2.25 2.25 2.210 1.55 2.25 2.210 1.55 2.25 2.210 1.55 2.25 2.210 1.55 2.210 2.25 2.210 1.55 2.25 2.210 1.55 2.210 2.25 2.210 1.55 2.210 2.25 2.210 1.55 2.210 2.210 2.25 2.210 1.55 2.210 2.210 2.210 2.25 2.210 1.55 2.210 2.210 2.210 2.25 2.210 2.210 2.25 2.25 2.25 2.210 2.25 2.2	168 164 164 124 12 4 12 4 21 1 PROJ 1 POSITI code: 1 de: 2 d.code: 0 y code: 3 ed: 4 NOUR PROJ POSITI code: 1 de: 2 25515 815 815 90 25 PROJ POSITI code: 1 de: 2 d.code: 0 y code: 3 ed: 3 N PROJ 1008 1008 1008 1008 100 100 100 10 10 10 10 10 10 10 10 10	22.48 6.93 6.93 0.56 0.15 100.16 ECT STATIO N:Lat S Long E *10 HOUR: 79: 0F TOT. C 95.50 3.28 0.64 0.54 100.00 ECT STATIO N:Lat S Long E *10 HOUR: 21: 0F TOT. C 67.99 25.04 3.57 0.65 0.36 0.54 100.10 ECT STATIO N:Lat S Long E	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Sepia officinalis hierreda Boogs boops 111ex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (mir LGG : 764.20 766.10 1.90 PDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 50 Sorted: 169 Kg Total catch: Sector 169 Kg Total catch: Sector 169 Kg Total catch: Sector 169 Kg Total catch: Sardinella maderensis Sardinella aurita Trachurus trecae Sarda catat stop duration TIME :22:70:00 12:47:00 20 (mir LGG : 811.60 812.60 1.00 PDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex macrophthalmus Trachurus trecae Dentex angolensis Toptado sp. Scorpaena stephanica Peristedion cataphractum Pontinus acraensis Spicara alta Zeus faber Chatedon hoefleri Chelidonichthys gabonensis Lepidotrigla codmani Aulopus cadenati Todarogis eblanae	65.06 52.06 20.06 1.62 0.44 289.89 (FE: PT No: 1) Purpose Area co GearCon validit 110 m Sp 3175.00 CATCH/ Weight 7580.00 24.25 7937.50 (FE: BT No: 1) Purpose Area co GearCon validit 511.75 1441.75 1441.75 1441.75 1445.75 14.70 13.80 7.65 5.55 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 2.05 4.05 1.20 2.05 2.05 4.05 1.20 2.05 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.00 2.05 3.05 3.00 2.05 3.00 3.05 3.00 3.05 3	168 164 124 12 4 21 PROJITI code: 1 de: 2 d.code: 1 de: 2 d.code: 4 vcode: 3 sed: 4 kn CATCH/ HOUR CATCH/ HOUR CATCH/ HOUR CATCH/ HOUR CATCH/ HOUR CATCH/ HOUR CATCH/ HOUR CATCH/ HOUR 1 Sed: 3 kn CATCH/ HOUR 1 Sed: 1 1 Sed: 1 2 5 5 1 Sed: 1 2 5 5 1 1 5 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1	22.48 6.93 6.93 0.56 0.15 100.16 ECT STATION N:Lat S Long E *10 HOUR: 79 OF TOT. C 95.50 3.28 0.68 0.54 100.00 ECT STATION ECT STATION N:Lat S Long E *10 HOUR: 21: OF TOT. C 67.99 25.04 0.65 0.35 0.55 0.36 0.54 100.00 ECT STATION HOUR: 21: OF TOT. C 67.99 25.04 0.52 0.65 0.23 0.24 0.25 0.23 0.15 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.23 0.15 0.15 0.23 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.15 0.23 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.23 0.15 0.15 0.15 0.15 0.15 0.23 0.15 0	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134
Sardinella maderensis Trichirura lepturus Sepia officinalis hierreda Boogs boops 111ex coindetii Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :06:58:00 07:22:00 24 (mir LGG : 764.20 766.10 1.90 PDEPTH: 10 10 BDEPTH: 10 10 BDEPTH: 10 50 Sorted: 169 Kg Total catch: SPECIES Sardinella maderensis Sarda ella aurita Trachurus trecae Sarda ella aurita Total DATE: 4/ 8/94 GEAR TI start stop duration TIME :12:27:00 12:47:00 20 (mir LGG : 811.60 812.60 1.00 PDEPTH: 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 BDEPTH: 127 127 Sorted: 142 Kg Total catch: SPECIES Dentex maylematica Frachurus trecae Dentex angolensis Toreling dir: 180 ^o Wire out: Sorted: 142 Kg Total catch: SPECIES Dentex maylematica Peristedion cataphractum Pontinus acreaenis Spicara alta Zeus faber Chelidonichthys gabonenis Lepidotrigla codmani Aulopus cadenati	65.06 65.06 1.62 20.06 1.62 0.44 289.89 (PE: PT No: 1) Purpose Area co GearCon Validit 110 m Sp 3175.00 54.25 43.25 7937.50 (PE: BT No: 1) Purpose Area co GearCon Validit 3580.00 24.25 43.25 7937.50 CATCH/ Weight 1443.75 51.75 5.85 5.85 5.35 4.36 2.55 5.25 2.25 2.25 2.25 2.25 2.210 1.55 2.25 2.210 1.55 2.25 2.210 1.55 2.25 2.210 1.55 2.210 2.25 2.210 1.55 2.25 2.210 1.55 2.210 2.25 2.210 1.55 2.210 2.25 2.210 1.55 2.210 2.210 2.25 2.210 1.55 2.210 2.210 2.210 2.25 2.210 1.55 2.210 2.210 2.210 2.25 2.210 2.210 2.25 2.25 2.25 2.210 2.25 2.2	168 164 164 124 12 4 12 4 21 1 PROJ 1 POSITI code: 1 de: 2 d.code: 0 y code: 3 ed: 4 NOUR PROJ POSITI code: 1 de: 2 25515 815 815 90 25 PROJ POSITI code: 1 de: 2 d.code: 0 y code: 3 ed: 3 N PROJ 1008 1008 1008 1008 100 100 100 10 10 10 10 10 10 10 10 10	22.48 6.93 6.93 0.56 0.15 100.16 ECT STATIO N:Lat S Long E *10 HOUR: 79: 0F TOT. C 95.50 3.28 0.64 0.54 100.00 ECT STATIO N:Lat S Long E *10 HOUR: 21: 0F TOT. C 67.99 25.04 3.57 0.65 0.36 0.54 100.10 ECT STATIO N:Lat S Long E	130 N: 66 1208 1338 37.50 SAMP 131 132 1332 23.40 SAMP 134

DATE: 4/ 8/94 GEAR TY start stop duration	PE: PT No:1		JECT STATIO ION:Lat S Long E	1134
TIME :23:52:00 00:25:00 33 (min LOG : 910.00 912.00 2.40) Purpose c Area code	ode: 1	Long	. 1342
FDEPTH: 6 7 BDEPTH: 29 33	Area code GearCond. Validity	code: code:		
	105 m Spee	d: 4 k		
Sorted: 125 Kg Total catch:	889.00	CATCH	/HOUR: 16	16.36
SPECIES	CATCH/HO weight nu	UR %	OF TOT. C	SAMP
Sardinella maderensis Trachurus trecae	1343.36 198.55	4340	83.11 12.28	136
Sphyraena guachancho Pomatomus saltatrix	40,73 11,45	51 4	2.52	
Brachydeuterus auritus Mugil cephalus	9.67 5.82	64 4	0,60	
Stromateus fiatola Engraulis encrasicolus	5.09 3.05	5 624	0.31 0.19	
Total	1617.72		100.08	
	PE: BT No:1	PRO POSIT	JECT STATIO ION:Lat S	1110
start stop duration TIME :12:46:00 13:06:00 20 (min LOG : 37.90 39.00 1.10) Purpose c Area code	ode: 1	Long E	1337
FDEPTH: 114 115 BDEPTH: 114 115	GearCond. Validity	code: 1		
Towing dir: 360° Wire out:	400 m Spee	d: 3 k	n*10	
Sorted: 59 Kg Total catch:	148,90	CATCH	/HOUR: 4	46.70
SPECIES	CATCH/HC weight nu	UR %	OF TOT. C	SAMP
Trachurus trecae Dentex macrophthalmus	240.00 93.30	780 660	53.73 20.89	137
Trichiurus lepturus Branchiostegus semifasciatus	21.30 19.50	51 15	4.77	
Brotula barbata Dentex angolensis Brovethvisuus balloni	18.00	60 60	4.03	
Pterothrissus belloci Zeus faber Pontinus accraensis	11.70 7.50 6.90	111 30 60	2.62 1.68 1.54	
Pagellus bellottii Todaropsis eblanae	3.30	6 66	0.74	
Umbrina canariensis Uranoscopus polli	1.80	6 15	0.40	
Spicara alta	0.75	6	98.84	
Total	441.45		98.64	
		PRO	JECT STATIC	N: 70
start stop duration	PE: PT No:1		TON:Lat S Long E	5 1108 5 1347
TIME :14:43:00 15:13:00 30 (min LOG : 53.10 54.80 1.70 FDEPTH: 16 16	 Purpose of Area code GearCond. 	e : 2		
BDEPTH: 45 44 Towing dir: 4* Wire out:	Validity	code: 1		
- Sorted: Kg Total catch:			/HOUR:	21.40
SPECTES	CATCH/H		OF TOT. C	SAMP
SPECIES Sardinella maderensis	17.60	umbers 52	0F TOT. C 82.24	SAMP 139
	weight nu	umbers		
Sardinella maderensis Trichiurus lepturus	weight nu 17.60 3.00	undbers 52 6	82.24	
Sardinella maderensis Trichiurus lepturus Pagellus bellottii	weight nu 17.60 3.00 0.80	umbers 52 6 2	82.24 14.02 3.74	1 3 9
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Sardinella maderensis Trichiurus lepturus Pagellus bellottii Total DATE: 5/ 8/94 GEAR TY Estart stop duration TIME :19:05:00 19:55:00 10 (min LOG :1092.50 1094.20 1.70 FPEFH: 10 10 BDEFTH: 10 10 BDEFTH: 71 59 Toving dir: 108" Wire out: Sorted: 73 Kg Total catch: Species Sardinella maderensis Trachurus trecae Sarda sarda Synagrops microlepis Brachydeuterus auritus Sepiells ornate Sardinela aufta Brachydeuterus duration TIME :04:3210 05:02:00 30 (min DATE: 6/ 8/94 GEAR TY Trachurus, Juveniles Total DATE: 6/ 8/94 GEAR TY TME :04:3210 05:02:00 30 (min DEFPN: 20 11 Towing dir: 260" Wire out: Sorted: 120 Kg Total catch: Species Brachydeuterus auritus Defensis Sorted: 120 Kg Total catch: Stromatous fistola Tachurus fryurus	<pre>weight m 17.60 3.00 0.80 21.40 21.40 PE: PT No:1) Purpose (Area codd GearCond, Validity 110 m Spee 196.30 CATCH/HK weight m 149.60 53.60 21.40 1.00 0.04 0.04 392.12 PE: PT No:2) Purpose (Area codd Catch/HK weight m 566.40 276.80 276.80 276.40 276.80 276.80 151.20 85.44 60.00</pre>	Imbers 52 6 2 PRO POSIT code: 1 code:	82.24 14.02 3.74 100.00 JECT STATIC TON:Lat S Long E Long E 	119 200.: 71 201.: 1340 202.: 60 SAMP 140 141 141 200.: 72 5 1040 2 1342 2 88 SAMP 142
Sardinella maderensis Trichiurus lepturus Pagelius beliottii Total DATE: 5/ 8/94 GEAR TY ESTAT stop duration TIME : 19:05:00 10;91:5:00 10 (min LOG : 1092.50 1094.20 1.70 FPEPTH: 10 10 BDEPTH: 71 59 Toving dir: 108* Wire out: Sorted: 73 Kg Total catch: SPECIES Sardinella maderensis Trichiurus lepturus Brachydeuterus auritus Bembrops heterurus BREB04 Trachurus, Juvenlies Total DATE: 6/ 8/94 GEAR TY ESTAT sarda catch: SPECIES Brachydeuterus auritus SPECIES Brachydeuterus auritus Brachydeuterus aurit	<pre>weight m 17.60 3.00 0.80 21.40 21.40 PE: PT No:1) Purpose (Area codd GearCond, Validity 110 m 149.60 53.60 21.40 17.60 10.20 2.00 1.7.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 17.60 10.20 2.00 10.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4</pre>	Imbers 52 6 2 PRO POSIT code: 1 code:	82.24 14.02 1.74 100.00 JECT STATIC TON:Lat S Long E Long E 	119 2007: 71 3 1055 2 1340 392.60 SAMP 140 341 2007: 72 5 1040 5 1040 5 1342 9882.88 SAMP 142 143
Sardinella maderensis Trichiurus lepturus Pagelius beliottii Total DATE: 5/ 8/94 GEAR TY Start stop duration TIME : 19:05:00 10;91:50:00 10; nain LoG : 1092.50 1094.20 1.70 FDEFTH: 10 10 BDEFTH: 71 59 Toving dir: 108* Wire out: Sorted: 73 Kg Total catch: SPECIES Sarda sarda Sarda sarda Sa	<pre>weight m 17.60 3.00 0.80 21.40 21.40 21.40 PE: PT No:1) Purpose C Area codd GearCond. Validity 110 m Spee 196.30 CATCH/HK weight m 149.0 0.04 0.04 0.04 392.12 PE: PT No:2 0.04 0.04 392.12 PE: PT No:2 0.04 CATCH/HK weight m 566.40 Spl.44 CATCH/HK W Weight m 566.40 Spl.44 CATCH/HK W Weight m 566.40 Spl.44 CATCH/HK W W Spl.44 CATCH/HK W W Spl.44 CATCH/HK W Spl.44 CATCH/HK</pre>	Imbers 52 2 PRO POSIT code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 4 cATCF 0UR 5 code: 1 code: 1 code: 4 cATCF 0UR 5 code: 1 code: 1	82.24 14.02 1.74 100.00 JECT STATIC TON:Lat S Long E Long E Long 5 0.01 0.05 13.65 5.45 5.45 5.45 5.45 5.45 5.45 1.0.25 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 1.05	119 2007: 71 3 1055 2 1340 392.60 SAMP 140 341 2007: 72 5 1040 5 1040 5 1342 9882.88 SAMP 142 143
Sardinella maderensis Trichiurus lepturus Pagellus bellottii Total DATE: 5/ 8/94 GEAR TY start stop duration TIME :19:05:00 1094:20 1.70 FDEFTH: 10 10 BDEFTH: 10 10 BDEFTH: 71 55 Sorted: 73 Kg Total catch: SPECIES Sardinella maderensis Trachurus trecce Sarda arda Synagrops microlepis Trichiurus lepturus Brachydeuterus auritus Sepiella crnata Sardinella aurita Bembrops heterurus BREDYdeuterus Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Trachurus, Juveniles Sorted: 120 Kg Total catch: SPECIES Brachydeuterus auritus DATE: 6/ 8/94 GEAR TY start stop duration TME :04:32:00 05:02:00 30 (mir LOG : 171.20 173.20 2.00 FDEFTH: 0 0 BDETT: 21 Towing dir: 280 Wire out: Sorted: 120 Kg Total catch: SPECIES	<pre>weight m 17.60 3.00 0.80 21.40 PE: PT No:1) Purpose of Area code GearCond. Validity 110 m Spee 196.30 CATCH/HG 0.26 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.0</pre>	Imbers 52 6 2 PRO POSIT code: 1 code: 1 source 4 34 4 38 6 4 36 52 56 PRO CATCE POSIT code: 1 code: 2 code: 1 code: 2 code: 2	82.24 14.02 1.74 100.00 JECT STATIC TON:Lat 5 Long E 	119 2007: 71 3 1055 2 1340 392.60 SAMP 140 341 2007: 72 5 1040 5 1040 5 1342 9882.88 SAMP 142 143

		PROJ	JECT STATIO	N: 73
start stop duration	PE: PT No:1	POSITI	ION:Lat S Long E	1032 1331
TIME :09:32:00 10:02:00 30 (min LOG :1215.40 1217.30 1.90 FDEPTH: 10 20 DODTU: 42 50	 Purpose c Area code GearCond. Validity 	e : 2 code: 1		
BDEPTH: 42 50 Towing dir: 250° Wire out:	130 m Spee	coae: 1 :d: 4 kn	*10	
Sorted: 98 Kg Total catch:	122.30	CATCH/	HOUR: 2	44.60
SPECIES	CATCH/HC	UR %	OF TOT. C	SAMP
Sardinella maderensis Sardinella aurita	weight nu 201.00 15.80	1012 88	82.17	145 146
Sardinella aurita Stromateus fiatola Trachurus trecae	10.20 8.00	14	4.17	140
Selene dorsalis Mugil cephalus	4.20	10	1.72	
Trichiurus lepturus	1.80	8	0.74	
Total	244.60		100.00	
		PROJ	JECT STATIO	N: 74
start stop duration	PE: BT No:1		ION:Lat S Long E	
TIME :14:06:00 14:36:00 30 (min LOG : 255.20 256.70 1.50	Area code	. 2		
FDEPTH: 117 115 BDEPTH: 117 115 Touing din 140: Him out	GearCond. Validity	code: 1	*10	
Towing dir: 340° Wire out: Sorted: 135 Kg Total catch:	400 m Spee 541.57			83.14
-				
SPECIES	CATCH/HC weight nu	umbers	OF TOT. C	SAMP
Trachurus trecae Dentex macrophthalmus	656.96 186.80	1936 960	60.65 17.25	148 147
Squatina oculata Zenopsis conchifer Dentex concensis	44.40 31.52 30.32	8 48 264	4.10 2.91 2.80	
Dentex congoensis Dentex angolensis Iller condetti	26.48	264 128 920	2.80	
Illex coindetii Pagellus bellottii Sprus provus fricanus	21.68 13.76 10.00	128	2.00 1.27 0.92	
Spārus pagrus africanus Brotula barbata Citharus linguatula	10.00 9.44 8.64	16 B 176	0.92 0.87 0.80	
Raja miraletus	8.32	16	0.77	
Hyperoglyphe moselii Lepidotrigla cadmani	6.90	2 80	0.64	
Trichiurus lepturus Zeus faber	6.32	8 8 80	0.58	
Spicara alta Todaropsis eblanae	3.52	56	0.32	
Peristedion cataphractum Sepia bertheloti	1.76	48	0.16	
Saurida brasiliensis Boops boops	0.80	16 16	0.07	
Lepidotrigla carolae	0.80	32	0.07	
Iotal	1063.94		100.05	
start stop duration TIME :05:07:00 05:37:00 30 (min LOG : 396:30 398.10 1.80 FDEPTH: 0 0 BDEPTH: 34 25	(PE: PT No:2 A) Purpose of Area code GearCond Validity 100 m Spee	POSIT: code: 1 e : 2 .code: 1 code: 1	JECT STATIO ION:Lat S Long E	953
Sorted: 116 Kg Total catch:	-			01.44
				SAMP
SPECIES	CATCH/H weight nu 2216.00	DUR % umbers 18752	OF TOT. C	SAMP
Chloroscombrus chrysurus Brachydeuterus auritus Trichiurus lepturus	832.00 205.44	844B 224	22.48	149
Trachinotus teraia Sardinella maderensis	152.64	352	4.12	151
Saluineila madelensis Trachurus trecae Sphyraena guachancho	101.76	704	2.75	150
Selene dorsalis Sardinella aurita	5.44	32 32	0.15	
Total	3701.44	~	100.01	
start stop duration TIME :11:04:00 11:34:00 30 (min LOG :1450.90 1452.30 1.40	(PE: BT No:] n) Purpose (Area code	code: 1 e : 2	JECT STATIO ION:Lat S Long E	N: 76 939 1257
FDEPTH: 92 91 BDEPTH: 92 91 Towing dir: 160 Wire out:	GearCond Validity 300 m Spec	.code: 1 code: 1	*10	
Towing dir: 360° Wire out: Sorted: 134 Kg Total catch:				18.00
-				
SPECIES	CATCH/H weight n	undbers	OF TOT. C	SAMP
Trachurus trecae Trichiurus lepturus	95.60	156	80.75	152
Dentex macrophthalmus Raja miraletus	58.80	232	5.78 1.38	
Umbrina canariensis Atractoscion aequidens	12.80	22	1.26	
2eus faber Dentex angolensis	4.80	14	0.47	
Illex coindetii Citharus linguatula	0.80	60 6	0.08	
Boops boops	0.40	6	0.04	
TIME :12:43:00 13:14:00 31 (mir	(PE: PT No:6 n) Purpose	code: 1		N: 77 938 1250
LOG : 461.20 463.30 2.10 FDEPTH: 0 0 BDEPTH: 122 124	Area cod GearCond Validity	.code: 1		
	Validity	code: l ed: 4 ki	n*10	
	120 m Spee			
Sorted: 68 Kg Total catch:	120 m Spee	CATCH	/HOUR: 4	57.55
	: 120 m Spee : 236.40 CATCH/H	OUR 💊	/HOUR: 4	
Sorted: 68 Kg Total catch: SPECIES	: 120 m Spea : 236.40 CATCH/H weight n	OUR % umbers	ОГ ТОТ. С	
Sorted: 68 Kg Total catch: SPECIES Sardinella maderensis Trachinotus ovatus	: 120 m Spee : 236.40 CATCH/H	OUR 💊		SAMP
Sorted: 68 Kg Total catch: SPECIES Sardinella maderensis	: 120 m Spea : 236.40 CATCH/He weight n 373.55 46.45	OUR % umbers 1415 95	OF TOT. C 81.64 10.15	SAMP 153 155

DATE: 7/ 8/94 GEAR T	YPE: PT No:1	PRO POSIT	JECT STATIO ION:Lat S	N: 78 918
			Long E	1242
LOG :1557.80 1559.80 2.00	Area code	: 2		
FDEPTH: 11 10 BDEPTH: 207 260	GearCond. Validity	code: 1	- • •	
Towing dir: 248• Wire out Sorted: 31 Kg Total catch	: 120 m Spee : 283.88			67.76
SPECIES	CATCH/HO weight nu	mbers	OF TOT. C	SAMP
MYCTOPHIDAE Synagrops microlenis	474.00 3	44952 5472	83.49 11.27	
Synagrops microlepis Trachurus trecae	25.40	36	4.47	
Sarda sarda Lestrolepis intermedia	4.00	2 72	0.70	
Total	567.76		99.99	
DATE: 8/ 8/94 GEAR T	YPE: PT No:1	PRO POSIT	JECT STATIO ION:Lat S	N: 79 910
start stop duration			Long E	
100 11635 00 1636 00 1 90		: 2		
FDEPTH: 10 10 BDEPTH: 52 69	GearCond. Validity	code: 1		
Towing dir: 270° Wire out	: 110 m Spee			
Sorted: Kg Total catch	54.90	CATCH	/HOUR: 1	09.80
SPECIES	CATCH/HO	UR 1	OF TOT. C	SAMP
		mbers 272		156
Sardinella maderensis Sarda sarda	14.40	10	77.60	7.20
Sardinella aurita Mugil cephalus	3.80 2.80	10 2	3.46 2.55	
Selene dorsalis Trachinotus ovatus	1.40	4	1.28	
Trachurus trecae	1.00	2	0.91	
Sepiella ornata CARSL91	0.20	10	0.18	
Total	109.80		100.00	
DATE: 8/ 8/94 GEAR T	YPE: PT No:6	PRO POSIT	JECT STATIO ION:Lat S	911
start stop duration TIME :15:21:00 15:59:00 38 (mi	n) Purpose c	ode: 1	Long E	1253
LOG : 691.30 693.90 2.60 FDEPTH: 0 0	Area code GearCond.	: : 2 code: 1		
BDEPTH: 333 192 Towing dir: 97* Wire out	Validity : 151 m Spee	code: 1		
Sorted: 36 Kg Total catch				83.24
Sorted: So kg Total Catch		CALCE	/ NUUK :	03.24
SPECIES	CATCH/HO		ог тот. с	SAMP
Sardinella maderensis	weight nu 50.68	145	60.88	157
Sarda sarda Trachinotus ovatus	14.76	8 21	17.73	159
Sardinella aurita	7.14	16	8.58	158
Total	83.24		100.00	
		890	JECT STATIO	N: 81
DATE: 8/ 8/94 GEAR I start stop duration	YPE: PT No:1		ION:Lat S Long E	854
TIME :19:50:00 20:20:00 30 (mi	n) Purpose o	ode: 1		
LOG :1728.70 1730.70 2.00 FDEPTH: 15 15				
	Area code GearCond.	e : 2 .code: 1		
BDEPTH: 116 180	GearCond. Validity	code: 1 code: 1 code: 1		
BDEPTH: 116 180	GearCond. Validity : 110 m Spee	code: 1 code: 1 code: 1 d: 4 k	n*10	27.40
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch	GearCond. Validity : 110 m Spee 1: 363.70	e : 2 code: 1 code: 1 ed: 4 k CATCH	n*10 I/HOUR: 7	27.40
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES	GearCond. Validity 110 m Spee 1: 363.70 CATCH/HC weight nu	e : 2 code: 1 code: 1 ed: 4 k CATCH	n*10 1/HOUR: 7 . of tot. c	27.40 Samp
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae	GearCond. Validity : 110 m Spee 1: 363.70 CATCH/HO weight nu 410.00	e : 2 .code: 1 .code: 1 .d: 4 k CATCH DUR 7 .mbers 820	n*10 1/HOUR: 7 6 OF TOT. C 56.37	27.40 Samp 160
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE	GearCond. Validity : 110 m Spee a: 363.70 CATCH/HC weight nu 410.00 180.00 87.00 2	code: 1 code: 1 code: 1 ed: 4 k CATCH DUR BUR 820 540 298180	n*10 1/HOUR: 7 0 OF TOT. C 56.37 24.75 11.96	27.40 Samp
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE Trichlurus lepturus Synagrops maicrolepis	GearCond. Validity : 110 m Spee : 363.70 CATCH/HK weight nu 410.00 180.00 87.00 2 40.00 5.00	e : 2 .code: 1 code: 1 id: 4 k CATCF DUR 7 imbers 820 540 298180 120 310	n*10 of ToT. C 56.37 24.75 11.96 5.50 0.69	27.40 Samp 160
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madgrensis MYCTOPHIDAE Trichlurus lepturus	GearCond. Validity :: 110 m Spee n: 363.70 CATCH/HO weight nu 410.00 180.00 B7.00 2 40.00	2 : 2 : 2 : 2 : 2 : 2 : 2 : 2 : 2 : 2 :	n*10 //HOUR: 7 0F TOT. C 56.37 24.75 11.96 5.50	27.40 Samp 160
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE Trichlurus lepturus Synagrope microlepis	GearCond. Validity : 110 m Spee : 363.70 CATCH/HK weight nu 410.00 180.00 87.00 2 40.00 5.00	e : 2 .code: 1 code: 1 id: 4 k CATCF DUR 7 imbers 820 540 298180 120 310	n*10 of ToT. C 56.37 24.75 11.96 5.50 0.69	27.40 Samp 160
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella moderensis MYCTOPHIDAE Trichlurus lepturus Synagrops microlepis Sardinella aurita	GearCond. validity :: 110 m Spee :: 363.70 CATCH/HC weight nu 410.00 180.00 87.00 5.00 5.00	code: 1 code: 1 code: 4 d: 4 k CATCF SUR 7 imbers 820 540 540 298180 120 310 10	n*10 0 OF TOT. C 56.37 24.75 11.96 5.50 0.69 0.69 99.96	27.40 Samp 160 161
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE Trichirus lepturus Synagtops microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 1	GearCond. validity :: 110 m Spee :: 363.70 CATCH/HC weight nu 410.00 180.00 87.00 5.00 5.00	s : 2 code: 1 code: 4 d: 4 k CATCF DUR 7 mmbers 820 540 298180 120 310 10	n*10 //HOUR: 7 o OF TOT. C 56.37 24.75 11.96 5.50 0.69 0.69 99.96 JECT STATIO	27.40 SAMP 160 161 N: 82 824
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE Trichiurus lepturus Synagrops microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 7 start stop duration TIME :07:25:00 07:55:00 30 (mi	GearCond. Validity :: 110 m Spec :: 363.70 CATCH/HL weight n 410.00 B7.00 2 40.00 5.00 727.00 YYPE: PT No:11 .n) Purpose c	code: 1 code: 1 code: 1 code: 4 code: 4 code: 4 code: 1 code: 1 code: 1 code: 1	n*10 //HOUR: 7 6 OF TOT. C 56.37 24.75 24.75 0.69 0.69 0.69 99.96 DJECT STATIO CION:LAL S Long E	27.40 SAMP 160 161 N: 82 824
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella maderensis MYCTOPHIDAE Trichlurus lepturus Synagrope microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 7 Start Stop duration TIME :07:25:00 07:55:00 30 (mi LOG : 1839.00 1840.80 1.80	GearCond. Validity :: 110 m Spee :: 363.70 CATCH/HC weight m. 410.00 180.00 180.00 5.00 727.00 727.00 rypE: PT No:1 	code: 1 code: 1 code: 1 d: 4 k CATCF 0UR 7 imbers 820 540 298180 120 10 10 10 PRC POSTI code: 1	n*10 //HOUR: 7 0 OF TOT. C 56.37 24.75 24.75 0.69 0.69 0.69 99.96 NJECT STATIO TION:Lat S Long E	27.40 SAMP 160 161 N: 82 824
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus tracae Sardinella enderensis MyCTOPHIDAE Trichlurus lepturus Synagrope microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAD DATE: 9/ 8/94 GEAD TIME :07:25:00 07:55:00 30 (mi LOG : 1839.00 1840.80 1.80 FDEPTH: 15 13 31	GearCond. Validity :: 110 m Spee :: 363.70 CATCH/HC weight m. 410.00 180.00 187.00 5.00 727.00 727.00 rypE: PT No:1 Area codd GearCond. Validity	- : 2 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1	n*10 //HOUR: 7 0 OF TOT. C 56.37 24.75 11.96 5.50 0.69 0.69 99.96 DIECT STATIO TION:Lat S Long E	27.40 SAMP 160 161 N: 82 824
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus tracae Sardinella enderensis MyCTOPHIDAE Trichlurus lepturus Synagrope microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAD DATE: 9/ 8/94 GEAD TIME :07:25:00 07:55:00 30 (mi LOG : 1839.00 1840.80 1.80 FDEPTH: 15 13 31	GearCond. Validity :: 110 m Spee :: 363.70 CATCH/HC weight m. 410.00 180.00 187.00 5.00 727.00 727.00 rypE: PT No:1 Area cod GarCond. Validity :: 110 m Spee	code: 1 code: 1 code: 1 d: 4 k CATCH DUR 7 mmbers 820 540 298180 120 310 10 10 POSID code: 1 code: 1 code: 1 code: 1 d: 3 k	n*10 //HOUR: 7 0 OF TOT. C 56.37 24.75 1.96 5.50 0.69 0.69 99.96 NJECT STATIO 'ION:Lat S Long E	27.40 SAMP 160 161 N: 82 824
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella maderensis MYCTOPHIDAE Trichlurus lepturus Synagrope microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 1 "Eart stop duration TIME: 07:25:00 07:55:00 30 (mi ILOG :1839-00 1840.80 1.80 FDEPTH: 15 15 DDEPTH: 18 31 Toving dir: 103° Wire out Sorted: 131 Kg Total catch	GearCond. validity :: 110 m Spec :: 363.70 CATCH/HG weight 10.00 10.00 5.00 727.00 727.00 (c) Purpose c Area coda GearCond. validity :: 110 m Spec :: 1946.00	- : 2 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 sour 1 sour 1 sour 1 code: 1 cod	n*10 , OF TOT. C 56.37 24.75 11.96 0.69 99.96 NJECT STATIO 100%:Lat S Long E n*10 1/HOUR: 38	27.40 SAMP 160 161 N: 82 824 1315 96.00
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinelia madarensis MYCTOPHIDAE Trichlurus lepturus Synagrops microlepis Sardinelia aurita Total DATE: 9/ 8/94 GEAR 1 start stop duration TIME :07:25:00 07:55:00 30 (mi LOG :1839.00 1840.80 1.80 FDEPTH: 15 15 BDEPTH: 15 15 SDEPTH: 13 31 Toving dir: 103° Wire out Sorted: 131 Kg Total catch	GearCond. validity 10 m Spee 11 363.70 CATCH/HC weight 10 00 10.0	code: 1 code:	n*10 , OF TOT. C 56.37 24.76 14.76 5.50 0.69 99.96 NJECT STATIO 100%:Lat S Long E n*10 1/HOUR: 18 of TOT. C	27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP
BDEPTH: 116 180 Towing dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella maderensis MYCTOPHIDAE Trichlurus lepturus Synagrops microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 7 Total DATE: 9/ 8/94 GEAR 7 Total DATE: 9/ 8/94 GEAR 7 TIME :07:25:00 07:55:00 10 TIME :07:25:00 07:55:00 1.80 FDEPTH: 15 15 DDEPTH: 18 13 DDEPTH: 18 13 Towing dir: 103° Wire out Sorted: 131 Kg Total catch SPECIES Sardinella maderensis Stromateus flatola	GearCond. validity :: 110 m Spee :: 363.70 CATCH/HC weight n. 140.00 150.00 5.00 727.00 727.00 ryPE: PT No:11 Area code GearCond. validity :: 110 m Spee n: 1948.00 CATCH/HC weight nn 2272.00 CATCH/HC	<pre>code: 1 code: 2 code: 2 code: 2 code: 2 code: 3 c</pre>	n*10 of TOT. C 56.37 24.75 11.66 5.50 0.69 99.96 DJECT STATIO 100%:Lat S Long E n*10 1/HOUR: 38 of TOT. C 58.32 18.12	27.40 SAMP 160 161 N: 82 824 1315 96.00
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella adderensis WTOOLINE lepturus Synagrope microlepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 1 "Start stop duration TIME :07:25:00 07:55:00 30 (mi LOG :1839.00 1840.80 1.80 FDEPTH: 15 15 BDEPTH: 15 15 BDEPTH: 13 15 Sorted: 131 Kg Total catch SPECIES Sardinella maderensis	GearCond. validity 10 m Spee 11 363.70 CATCH/HK weight nt 180.00 87.00 2 40.00 5.00 727.00 727.00 rype: PT No:1 rype: PT No:1 rype: PT No:1 rype: PT No:1 rype: 10 m Spee 1948.00 CATCH/HK weight nn Spee 1948.00 CATCH/HK weight no Spee 1948.00 CATCH/HK 1948.	Carter imbers parts	n*10 //HOUR: 7 of TOT. C 56.37 24.75 1.96 5.50 0.69 0.69 99.96 DIECT STATIO TION:Lat S Long E 	27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE Tynsgroppe alcrolepis Sardinella aurita Total DATE: 9/ 8/94 GEAR 1 start stop duration TIME :07:25:00 07:55:00 30 (mi LOG :1839.00 1840.80 1.80 FDEFTH: 15 15 BDEPTH: 15 15 BDEPTH: 13 13 Toving dir: 103° Wire out Sorted: 131 Kg Total catch SPECIES Sardinella maderensis Stromateus flatola Trichlurus lepturus Trachurus trecae Sardinella aurita	GearCond. validity 10 m Spec 13 363.70 CATCH/HC weight 10.00 87.00 2 40.00 5.00 727.00 727.00 ryPE: PT No:1 727.00 ryPE: PT No:1 (n) Purpose c Area coda GearCond. validity 10 m Spec 11 48.00 CATCH/HC weight m 727.00 CATCH/HC	 2.2 code: 1 code: 1 code: 4 code: 4 code: 1 code: 3 s20 540 120 <li< td=""><td>n*10 OF TOT. C 56.37 11.96 5.50 0.69 99.96 DJECT STATIO TION:Lat S Long E </td><td>27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP</td></li<>	n*10 OF TOT. C 56.37 11.96 5.50 0.69 99.96 DJECT STATIO TION:Lat S Long E 	27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus trecae Sardinella madarensis MYCTOPHIDAE Trichlurus lepturus Sardinella aurita Total DATE: 9/ 8/94 GEAR 1 start stop duration TIME : 07:25:00 07:55:00 30 (mi LOG :1839.00 1840.80 1.80 FDEPTH: 15 15 BDEPTH: 18 13 DEPTH: 18 13 DEPTH: 18 13 Sorted: 131 Kg Total catch SPECIES Sardinella maderensis Stromateus fistola Trichlurus lepturus Trachurus trecae Sardinella aurita Brachydeuterus auritus Sarda stda	GearCond. validity 10 m Spec 13 363.70 CATCH/HC weight 10.00 87.00 2 40.00 5.00 727.00 727.00 FYPE: PT No:1 727.00 FYPE: PT No:1 (n) Purpose c Area codd GearCond. validity 10 m Spec 12 40.00 CATCH/HC weight m 2275.00 CATCH/HC 0 5.00 CATCH/HC 10 Spec 12 40.00 CATCH/HC 10 Spec 12 40.00 CATCH/HC 10 5.00 CATCH/HC 10 5.00 10 5.00 CATCH/HC 10 5.00 CATCH/HC	 code: 1 code: 1 code: 4 code: 4 code: 1 code: 3 code: 3 code: 3 code: 3 code: 3 code: 4 code: 4 code: 4 code: 5 code: 4 code: 4 code: 5 code: 4 code: 4 code: 4 code: 5 code: 4 code: 4 code: 5 code: 4 code: 4 code: 4 code: 4 code: 5 code: 4 code: 4 code: 4 code: 5 code: 4 code: 4 code: 5 code: 5 	n*10 i/HOUR: 7 • OF TOT. C 56.37 11.96 0.69 99.96 JJECT STATIO CION:Lat S Long E 	27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus tracae Sardinella maderensis WYCTOPHIDAE Trichiurus lepturus Synagropa microlepis Sardinella aurita Totai DATE: 9/ 8/94 GEAD DATE: 9/ 8/94 GEAD Totai DATE: 9/ 8/94 GEAD Totai	GearCond. validity :: 110 m Spee :: 363.70 CATCH/HC weight m 410.00 18000 18000 5.00 727.00 TYPE: PT No:1 .n) Purpose c Area code GearCond. validity :: 110 m Spee 1: 3948.00 CATCH/HC weight m 2272.00 CATCH/HC	 code: 1 code: 1 code: 1 d: 4 k cATCF status <l< td=""><td>n*10 //HOUR: 7 56.37 24.75 11.96 550 0.69 99.96 DJECT STATIO ION:Lat S Long E </td><td>27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP</td></l<>	n*10 //HOUR: 7 56.37 24.75 11.96 550 0.69 99.96 DJECT STATIO ION:Lat S Long E 	27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP
BDEPTH: 116 180 Toving dir: 260° Wire out Sorted: 73 Kg Total catch SPECIES Trachurus tracae Sardinella maderensis WYCTOPHIDAE Trichlurus lepturus Synagropa microlepis Sardinella aurita Totai DATE: 9/ 8/94 GEAD DATE: 9/ 8/94 GEAD Totai DATE: 9/ 8/94 GEAD Sorted: 131 Kg Total catch SPECIES Sardinella maderensis Stromateus flatola Trichlurus lepture Tarchydeuterus auritus Sarda sarda Atractoscion aequidens Lithognathus mormyrus	GearCond. Validity 10 m Spee 13 363.70 CATCH/HC weight ni 410.00 100.00	 code: 1 code: 1 code: 4 code: 4 carce seconde: 4 seconde: 4	n*10 //HOUR: 7 0 OF TOT. C 56.37 24.75 11.96 5.50 0.69 99.96 NJECT STATIO ION:Lat S Long E 	27.40 SAMP 160 161 N: 82 824 1315 96.00 SAMP
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	PROJECT STATION: 83
start stop duration	YPE: PT No:6 POSITION:Lat S 75
TIME :01:20:00 02:03:00 43 (m1 LOG : 999.40 1.90 2.50	n) Purpose code: 1 Area code: 12
FDEPTH: 0 0 BDEPTH: 111 105	GearCond.cods: 1 Validity cods: 1
Towing dir: 90° Wire out	: 120 m Speed: 3 kn*10
Sorted: 175 Kg Total catch	: \$06.20 CATCH/HOUR: 1264.47
61-61- 00	CATCH/HOUR NOF TOT. C SAM
SPECIES	weight numbers
Trachurus trecae Sardinella maderensis	772,67 1577 61,11 16 418,60 1200 33.10 16
Sarda sarda Trachinotus ovatus	36.84 14 2.91 20.15 49 1.59
Trichlurus lepturus Sepiella ornata	11.44 28 0.90 4.74 119 0.37
Total	1264.45 99.98
	PROJECT STATION: 8
DATE:10/ 8/94 GEAR T start stop duration	YPE: PT No:1 POSITION:Lat S 72 Long E 123
TIME :10:10:00 10:40:00 30 (mi LOG :2078.50 2080.60 2.10	n) Purpose code: 1 Atea code : 2
FDEPTH: 10 10 BDEPTH: 108 103	GearCond.code: 1 Validity code: 1
	: 110 m Speed: 4 kn*10
Sorted: 134 Kg — Total catch	: 1345.00 CATCH/HOUR: 2690.00
SPECIES	CATCH/HOUR % OF TOT. C SAM weight numbers
Sardinella maderensis Sardinella aurita	1492,00 5280 55,46 18 1198,00 3040 44,54 18
Total -	2690.00 100.00
	PROJECT STATION: 0
	YPE: PT No:6 PUSITION:Lat S 72
TIME :13:45:00 14:17:00 32 (mi	n) Purpose code: 1
LOG : 102.10 103.90 1.80 FDEPTH7 0 0	Area code : 2 GearCond.code: 1
BDEPTH: 97 104 Towing dir: 240° Wire out	Validity code: 1 : 140 m Speed: 3 kn*10
Sorted: 13 kg – Total catch	: 13.75 CATCH/HOUR: 25.76
-	
SPECIES	CATCH/HOUR & OF TOT. C SAMe weight numbers
Sepiella ornata Sardinella maderensis	14.25 345 55.28 10 11.53 39 44.72 10
Total	25.78 100.00
10281	29.78 100.00
	GearCond.code: 1 Validity code: 1 : 140 m Speed: 3 kn*10
Sorted: Kg Total catch	1: 0.37 CATCH/HOUR: 0.74
SPECIES	CATCH/HOUR & OF TOT. C SM
Sepiella ornata	weight numbers 0.74 14 100.00
Total	0.74 100.00
	PROJECT STATION: YPE: BT No:1 FOSITION:Lat S 74
start stop duration	Long E 12
TIME :10:05:00 10:35:00 30 (mi LOG :2287.60 2289.00 1.40	Area code : 2
FDEPTH: 113 116 BDEPTH: 113 116	GwarCond.code: 1 Validity code: 1
Towing dir: 200° Wire out	
Sorted: 21 Kg Total catch	1 102.84 CATCE/HOUR: 205.6
SPECIES	CATCH/HOUR & OF TOT. C SAU
Dentex angolensis	weight, numbers 44.80 320 21.78
Trachurus trecse, juvenile Epinephelus aeneus	35.20 1464 17.11 1 18.40 4 8.95
Dentex congoensis Trachurus trecae	17.60 472 8.56 16.20 32 7.88
Spicara alta Illes coindetii	16.00 776 7.78 10.60 344 5.15
Todaropsis eblanse Lepidotrigla cadmani	8,20 152 3,99 7,40 88 3,60
Atractoscion acquidens Sepia officinalis hierredda	7.20 2 3.50 5.40 8 3.11
Zeus faber	6.00 16 2.92 3.60 144 1.75
Lepidotrigla carolae Brotula barbata Gauda marda	3.60 2 1.75
Sarda yarda Boops boops	0.88 48 0.43
Citharus lingustula	0.40 16 0.19
Total	205,68 100.01
DATE:11/ 8/94 GEAR 1	PROJECT STATION: TYPE: PT No:6 POSITION:Lat S 6
start stop duration TIME :17:51:00 19:21:00 30 (mi	n) Purpose code: 1.
LOG :2356.00 2358.00 2.00 FDEPTH: 0 0	Area code : 2 GearCond.code: 1
BDEPTH: 3: 31	Validity code: 1 : 140 m Speed: 4 kn*10
Sorted: 95 Kg Total cate	
Letter 22 ng 10tat tato	
SPECIES	CATCH/HOUR & OF TOT. C SA
Chloroscombrus chrysurus	weight numbers 768,60 5314 57.43 1
Sardinella maderensis Sardinella aurita	502.00 2194 37.51 1 37.80 126 2.82 1
Selene dorsalía Trichiurus lepturus	15,96 112 1.19
	14.14 42 1.06
ToLal	14.14 42 1.06 1338.50 100.01

PROJECT STATION: 89 DATE:12/8/94 GEAR TYPE: PT No:1 POSITION:LAL S 617 GLART SCORE (MIN) Purpose code: 1 LOG : 455.60 457.70 2.10 Area code : 2 PDFTH: 15 15 GestCond.code: 1 DULTH: 61 50 Wire out: 80 m Speed: 4 kn*10 Sorted: 69 Kg Total catch: 200
 CHOUR
 % OF
 TOT.
 C
 SAMP

 numbers
 2268
 77.29
 173
 2
 11.28
 196
 4.71
 54
 4.33
 18
 1.42
 90
 0.98
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 56
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 SPECIES CATCH/HOUR CATCH/ weight 1096.20 160.00 66.78 61.38 20.16 13.86 Trachurus trecae Mola mola Sardinella maderensia Trichiurus lepturus Auxia thazard Sepiella ornata 100.01 1418.38 Tota 1
 PROJECT STATION: 90

 DATE:11/8/94
 GEAR TYPE: PI No:1 POSITION:Lat 5 620

 start stop duration
 Long E 1136

 TIME :10:05:00 10:50:00 45 (main) Purpose cude: 1
 Long E 1136

 LOG :2500.00 2502.70 2.70 Area code : 2
 TOEPTH: 10 10 GearGond.code: 1

 BDEPTH: 166 124 Validity code: 1
 Towing dir: 64* Wire out: 110 m Speed: 41 kn*10

 Sortad:
 Xo
 Totic
 Sorted: Kg Total catch: CATCH/HOUR: CATCH/HOUR % OF 70T. C SAMP weight numbers 0.00 SPECIES NO CATCH -----Total PROJECT STATION: 91 DATE:12/ 8/94 GEAR TYPE: PT No:1 POSITION:Lat S 605 start stop duration Long E 1137 TIME :19:20:00 19:55:00 15 (min) Purpose code: 1 LOG :2581.80 2584.20 2.40 Area code : 2 FDEFTH: 0 0 GearCond.code: 1 BDEFTH: 139 152 Volidity code: 1 Towing dir; 280' Wire out: 150 m Speed: 4 kn*10 Sorted: 112 Ko Tetritoria Sorted: 112 Kg Total catch: 643.96 CATCH/HOUR: 1103.93 CATCH/HOUR & DF TOT. C SAMP weight numbers 509.92 2054 51.44 175 270.40 470 25.22 174 170.88 67 2.21 19.10 48 67 2.21 19.10 48 1.72 17.89 9 1.629 3.22 2 0.29 1103.93 0.29 SPECIES Sardinella maderensig Trachurus trecae Trichiurus lepturus Selene dorsalis Sardinella aurita Sarda sarda Auxis thazard 1103.93 Total
 PROJECT STATION:
 92

 BATE:12/0/94
 GEAR TYPE: PI No:2
 POSITIONLAL
 S 612

 start
 stop
 duration
 Long E [1]9

 TIME :23:05:00 23:35:00 30 (min) Purpose code: 1
 Long E [1]9
 Long E [1]9

 LOG :261:00 2612:00 1.50 Ares code: 2
 PDEPTH:
 0
 Gearcond.code: 1

 DEPTH:
 112
 118
 Validity code: 1
 Towing dir: 235 Wire out: 150 a Speed: 1 kn*10
 Sorted: 66 Kg Total catch: 165.43 CATCH/HOUR: 330.86 SOF TOT. C SAMP SPECIES CATCH/HOUR CATCH/HOUR & 06 TOT. C SAMP weight numbers 162.50 530 49.11 178 65.00 50 19.65 52.80 1294 15.96 176 40.00 64 12.09 177 5.60 150 ...69 4.96 10 ...50 Sordinella maderensis Trichlurus lepturus Trachurus trecae, juvenile Trachurus trecae Sepiella ornata Trachinotus ovatus 310,86 100.00 Total
 PROJECT STATICH: 93

 DATE:13/ 8/94
 GEAR TYPE: PT No:2
 POSITION:Lat
 S
 628

 start
 stop
 duration
 Long
 E
 1131

 Thf:
 106:05:00
 06:50:00
 45
 (min)
 Purpose code: 1

 LOG
 :2670.40
 2672.60
 2.20
 Ares code
 :2

 PSPTH:
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 GearCond.code: 1
 UORPTH:
 :254
 Validity code: 1

 Tooring dir:
 :5*<Wire out: 140 m Speed: 36 km*10</td>
 Sorted:
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 Total cut-th
 Sorted: Kg Total catch: CATCH/HOUR: CATCH/HOUR SOF TOT. C SAMP weight numbers 0.00 SPECIES но сатсн ----Total
 PROJECT STATION: 94

 DATE:15/ 8/94
 GEAR TYPE: PT No:5 POSITION:Lat S 533 atart stop duration
 Long E 1331

 THE: 114:15:00 14:49:00 30 (with) Purpose code: 1
 Long E 1331

 LOG : 997.80 999.50 1.70
 Area code : 2

 PDEFTH: 160 160
 Generation Generation

 BDEFTH: 361 134
 Validity code: 1

 Towing dir: 60° wire out: 480 m Speed: 36 kn*10

 Sortent: 28 Ko
 Total catch: 28.80 CATCH/HOUR: 57.60 Sorted: 28 Kg CATCH/HOUR & OF TUT. C SAMP weight numbers 57.60 48468 100.00 57.60 100.00 SPECIES MYCTOPHIDAE Total

DATE:16/ 8/94 GEAR start stop duration	TYPE: PT No:1	PUSIT	Long	E 114
TIME :06:15:00 06:45:00 30 (1	un) Purpose	code: l e : 2		
LOG #3139.00 3140.70 1.70 FDEPTH: 50 40 BDEPTH: 83 76	Area cod GearCond	e :∦ .code:1		
BDEPTH: 83 76 Towing dir: 80° Wire ou	Validity it: 190 m Spec	code: 1 ed: 3 k	n+10	
Sorted: 23 Kg Total cate			/HOUR:	50.84
Sorced: 23 kg Total Care		CAICA	J HOUR !	
SPECIES	CATCH/H weight n		OF TOT, C	SAM
Trachurus trecae	37.30	72	73.37	17
Selene dorsalis Scomber japonicus	5.60 4.60	14	11.01 9.05	
Trichiurus lepturus	2.26	2	4.45	
Sardinella aurita Sepiella urnata	0.86	2	1.69	
•		•		
Total	50.84		100.00	
		PRO	GECT STATI	ON: 9
start stop duration	TYPE: BT No:6		ION:Lat Long	S 54
TIME :09:05:00 09:58:00 53 (# LJG :3158.00 3160.60 2.60	nin) Purpose Area cod	code: 3 e : 1		
FDEPTH: 195 207	GearCond	.code: 1		
BDEFTH: 195 207 Towing dir: 10" Wire ou	Validity It: 650 m Spe	code: i ed: 3 k	n*10	
Sorted: J1 Kg Total cate				644.72
SPECIES	weight n	undoers	OF TOT. C	SAN
Pentheroucion mbizi Synagrops microlepis	204.91	1936 8395	31.78 23.55	
Pterothrissus belloci	124.30	856	19.28	
Dentex angolensis Brotula barbata	47.89 36.58	143	7.43 5.69	
Trichiurus lepturus	26.26	245	4.07	
MYCTOPHIDAE Zenopsis conchifer	20.38	8823 20	3.16 1.83	
Parapenaeus longirostris	8.50	1162	1.33	
Todaropsis eblanae Illez coindetii	5.32 3.51	36 61	0.83	
Uranoscopus albesca	1.58	50	3.25	
Sepiella ornata Chlorophthalmus atlanticus	1.02	20	0.16 0.94	
Ariomma bondi	9.21	20	0.04	
Monolene microstoma	9.23	20	0.04	
Total	644.72		100.02	
TIME :11:41:00 12:11:00 30 (r LOG :3171.10 3172.70 1.60	ain) Purpose Area cod	FOSIT Code;] e ;]) L	ION: 9 S 54 E 112
TIME :11:41:00 12:11:00 30 (f LOG :3171.10)172.70 1.60 FDEFTH: 304 311 BDEPTH: 304 311 Towing dir: 15 Wire of	min) Purpose Area cod GearCond Validity It: 950 m Spe	FOSI1 code: 1 e : 1 .code: 1 .code: 1 code: 1 ed: 3 k	Long Long n*10	S 54 E 112
TIME :11:41:00 12:11:00 30 (1 LOG :3171.10 3172.70 1.60	min) Purpose Area cod GearCond Validity It: 950 m Spe Ch: 294.00	FOSII code: 1 e : 1 .code: 1 code: 1 ed: 3 k CATCH	Long	S 54 5 54 5 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171.10 3172:70 1.60 FDETTH: 304 311 DETTH: 304 311 Tewing dir: 15 Wire of Sorted: 29 Xg Total cata	min) Purpose Area cod GearCond Validity It: 950 m Spe Chr 294.00 CATCH/H weight n	FOSII e : 1 code: 1 code: 1 ed: 3 k CATCH	FION:Lat Long a m*10 H/HOUR: a of Tot. C	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171.10 3172.70 1.60 PDEFTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Kg Total cate SPECIES Chlorophthalmus atlanticus	min) Purpose Area cod GearCond Validity It: 950 m Spe Chr 294.00 CATCH/H weight n 261.00	FOSIT code; 1 code; 1 code; 1 code; 1 ded: 3 k CATCH	FION: LAL Long i i i	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171.10 3172.70 1.60 PDETTH: 304 311 DETTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Xg Total cat: SPECIES Chlorophthalmus atlanticus Synagroba microlepis	min) Purpose Area cod GearCond Validity it: 950 m Spe Chr 294.00 CATCH/H weight 261.00 127.00 78.00	FOSIT code; 3 e : 1 code; 1 code; 1 ed: 3 k CATCH OUR 3 SURDERS S44C S14C 44C	FION:Lat Long L L L L L L L L L L L L L L L L L L L	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (r LOG :3171:10 3172:70 1.60 PDEFTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Kg Total cat: SPECIES Chlorophthalmus atlanticus Synogropp microlopis Merluccius polli Trichiurus lepturus	min) Purpose Area cod GearCond Validity It: 950 m Spe Chr 294.00 CATCH/H weight n 261.00 127.00 78.00 49.00	FOSIT code: 1 code: 1 code: 1 code: 1 ed: 3 k CATCH OUR 5 544C 514C 514C 50G	FION:Lat Long i i i i i i i i i i i i i i i i i i i	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (r LOG :3171:10 3172:70 1.60 PDEFTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Kg Total cat: SPECIES Chlorophthalmus atlanticus Synegropa microlopis Merluccius polli Trichiurus lepturus Pentheroscion wiri Pentheroscion wiri	<pre>min) Purpose Area cod GearCond Validity 11: 950 m Spe ch: 294.00 CATCH/H weight n 261.00 127.00 78.00 49.00 24.20</pre>	FOSI1 code: 1 code: 1 code: 1 ed: 3 k CATCH OUR 5 site 5440 5440 5440 5400 1200 1200	FION:Lat Long Long Kit Kit Kit Kit Kit Kit Kit Kit Kit Kit	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171.10 3172.70 1.60 PDEPTH: 304 311 DDEPTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Kg Total cato SPECIES Chlorophthalmus atlanticus Synogropa microlopis Merluecus polli Trichlurus lepturus Pentheroscion muiri Nematocarcinus africanus Pterothrisevus belloci	min) Purpose Area cod GearCond Validity It: 950 m Spe Chr 294.00 CATCH/H Weight n 127.00 78.00 49.00 24.20 24.00 13.40	FOSIT code: 1 e : 1 code: 1 code: 1 ed: 3 k CATCH OUR 3 sumbers 5446 5146 5146 5146 5146 5146 5146 5146	FION:Lat Long i i i i i i i i i i i i i i i i i i i	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171:10 3172:70 1.60 PDETTH: 304 311 Tewing dir: 15 Wire of Sorted: 29 Kg Total cats SPECIES Chlorophtaimus atlanticus Synegropa microlopis Merluccius polli Trichurus lepturus Pentheroscion abiri Venetocarcinus afficanus Pertheroscions afficanus Pertheroscions afficants	<pre>min) Purpose Area cod GearCond Validity ti 950 m Spe Chr 294.00 CATCH/H weight n 261.00 127.00 49.00 24.00</pre>	FOSI1 code: 1 code: 1	FION:Lat Long Long Lit Lit Lit Lit Lit Lit Lit Long Long Long Long Long Long Long Long	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :171:10 13:72:70 1.60 PDETTH: 304 311 Tewiny dir: 15 Wire of Sorted: 29 Kg Total cata SPECIES Chlorophtalmus atlanticus Synagropa microlepis Merluccius polli Trichiurus leptorus Pearbeneroscion abiri Pearbeneroscion soficenus Pearbeneros longitottis SCBECON Societatis Malacocephalus occidentalis Leemonema Leureysi	<pre>min Purpose</pre>	FOSI1 code: 1 code:	FION:Lat Long Long Schoult: Sc	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (r LOG :3171:10 3172:70 1.60 PDEFTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Kg Total cata SPECIES Chlorophthalmus atlanticus Synagropa elerologis Merluccius polli Trichiurus lepturus Pentheroscion whiri Nesstocarcionus africanus Pterothrissus belioci SCRECOI Parapenaeus longirostris Malecocephalus occidentalis Laemonema laureysi MyrCTOPHIDAE	<pre>min Purpose</pre>	FOSI1 code: 1 code:	<pre>FION:Lat Long Long Fin*10 S/HOUR: 44.39 19.90 13.27 8.33 4.12 4.08 2.28 0.95 0.58</pre>	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171:10 3172:70 1.60 PDETTH: 304 311 Towing dir: 15 Wire of Sorted: 29 Xg Total cats SPECIES Chlorophthaimus atlanticus Syngoropa microlopis Merluccius polli Trichurus lepturus Peatheroscion wiri Nestocorcinus africanus Pertonius africanus Pertonius africanus Pertonius africanus Pertonius Jongfrontris Malecorephalus Docidentalis Lesmonema Laureysi MyCROOPHIDAE MyCROOPHIDAE	<pre>min Purpose</pre>	FOSI1 Code: 1 code:	PION:Lat Long 	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171:10 3172:70 1.60 PDETTH: 304 311 Towing dir: 15 Wire of Sorted: 29 Xg Total cats SPECIES Chlorophthaimus atlanticus Syngoropa microlopis Merluccius polli Trichurus lepturus Peatheroscion wiri Nestocorcinus africanus Pertonius africanus Pertonius africanus Pertonius africanus Pertonius Jongfrontris Malecorephalus Docidentalis Lesmonema Laureysi MyCROOPHIDAE MyCROOPHIDAE	<pre>min Purpose</pre>	FOSI1 Code: 1 code:	<pre>// ION:Lat Long</pre>	S 54 E 112 586.00
TIME :11:41:00 12:11:00 30 (1 LOG :3171:10 3172:70 1.60 PDETTH: 304 311 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPICIES Chlorophtaimus atlanticus Synegrops microlepis Merluccius polli Trichiurus lepturus Pentheroscion whiri Westocorcinus sfriesnus Settool sorus belloci SCHECOI sous belloci SCHECOI sous belloci SCHECOI sous belloci SCHECOI sous belloci SCHECOI sous belloci SCHECOI sous belloci SCHECOI SCHECOI SCHECOI Total	<pre>min) Purpose Area cod GearCond Validity 15: 950 m Spe Chr 294.00 CATCH/H weight n 261.00 127.00 24.20 25.20</pre>	FOSI1 Code: 1 e : 1 .code: 1 .code: 1 ed: 3 k CATCH OUR 3 .44C 514C 514C 126C 100C 100C 100C 20 00 800 800 800	CION:Lat 	S 54 E 112 588.00 : SAM
TIME :11:41:00 12:11:00 30 (i LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire of Sorted: 29 Kg Total catu SPICIES Chlorophthalmus atlanticus Synegropa microlepis Merluccius polli Trichiurus lepturus Pentheroscion whiri Westocorcinus sfricanus Settone sorticanus Scatcorephalus occidentalis Leemonema Longicatris Malacorephalus occidentalis Leemonema Longicatris Malacorephalus occidentalis Leemonema Longicatris Malacorephalus occidentalis Leemonema Longicatris Malacorephalus occidentalis Leemonema Leureysi MyCTOPHIDAE MORGAO2 SCRECO Total	Min) Purpose Area cod GranComd Validity Still 950 m Spe Chi 294.00 Chi 294.00 Chi 294.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 2.80 0.00 5.60 0.00 580.00 TYPE: BT Norll	FOSI1 code: 1 code: 1 code: 1 code: 1 code: 3	TION:Lat 	S 54 E 112 588.00 : SAM ION; 9 S 54
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPECIES Chlorophthalmus atlanticus Synegropa microlopis Merluccius polli Trichiurus lepturus Pentheroscion müri Wentocarcinus africanus Verothrissus belloci Perapenaeus longironstris Maiscocephalus Jocidentalis Lesmonema Loureysi MycToPHIDAE MORGA02 SCREC0 Total DATE:16/ 8/94 GEAR start stop duraLio TIME :14:00:00 14:30:00 30 (r LOG : 184.20 155.70 1.50	Min) Purpose Area cod GrearCond Vailaity Som Spe Chr 294.00 Chr 294.00 Chr 294.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 5.4	FOSI1 code: 1 4 1 1 .code: 1 code: 1 ed: 3 k CATCH OUR 7 544c 544c 544c 544c 1000 200 440 200 440 800 800 800 800 800 800 8	<pre>FION:Lat </pre>	S 54 E 112 588.00 : SAM ION; 9 S 54
TIME :11:41:00 12:11:00 30 (r LOG :3171:10 13:72:70 1.60 PDETTH: 304 111 Towing dir: 15' Wire of Sorted: 29 Kg Total cata SPECIES Chlorophthalmus atlanticus Syngeropa microlopis Merluccius polli Trichiurus lepturus Pentheroscion miri Wentocarcinus africanus Ventohrissus belloci Pertheroscion siri Naikocoephalus Jocidentalis Lesmonema Loureysi MycToPHIDAE MORGA02 SCREC0 Total DATE:16/ 8/94 GEAR start stop duration TIME :14:00:00 14:30:00 30 (r LOG : 184.20 155.70 130 (r FDETTH: 411 413	<pre>min Purpose</pre>	FOSI1 code: 1 4 1 1 .code: 1 code: 1 ed: 3 k CATCH OUR 7 .umbers 544c 544c 126 100 200 440 200 400 800 800 800 800 800 800 8	PION:Lat Long (/HOUR: 4 OF TOT. 0 44.39 19.90 13.27 0.33 4.02 0.22 0.58 0.48 0.48 0.48 0.48 0.48 0.44 100.02 2005 2005 2005 2005 2005 2005 2005	S 54 E 112 588.00 : SAM ION; 9 S 54
TIME :11:41:00 12:11:00 30 (r LOG :3171:10 3172:70 1.60 PDETTH: 304 311 Towing dir: 15' Wire of Sorted: 29 Xg Total cat Species Chlorophthalmus atlanticus Syngeropa microlopis Merluccius polli Trichiurus lepturus Peatheroscion wiri Nesatocorcinus africanus Pretochrissus belloci Screco Nesatocorcinus africanus Pertochrissus belloci Screco Screco Total DATE:16/ 8/94 CEAR DATE:16/ 8/94 CEAR DATE:16/ 8/94 CEAR DATE:16/ 8/94 CEAR Stati stop duration TiME :14:00:00 14:30:00 30 (r LOG : 184:20 155:70 1.50 FOEFTH: 411 413 Towing dir: 25' Wire on	<pre>min Purpose Area cod GrearCond Validity it: 950 m Spe chr 294.00 chr(H/H) chr(H/H) reisht chr(H/H) chr(H/H)</pre>	FOSI1 code: 1 e : 1 .code: 1 code: 1 ed: 3 k CATCH OUR 7 .umbers 544c 44c 44c 44c 106 106 20 400 20 60 80 80 80 80 80 80 80 80 80 8	PION:Lat Long 	S 54 E 112 588.00 : SAM ION: 9 S 54 Σ 112
TIME :11:41:00 12:11:00 30 (r LOG :3171:10 13:72:70 1.60 PDETTH: 304 111 Towing dir: 15' Wire of Sorted: 29 Kg Total cata SPECIES Chlorophthalmus atlanticus Syngeropa microlopis Merluccius polli Trichiurus lepturus Pentheroscion miri Wentocarcinus africanus Ventohrissus belloci Pertheroscion siri Naikocoephalus Jocidentalis Lesmonema Loureysi MycToPHIDAE MORGA02 SCREC0 Total DATE:16/ 8/94 GEAR start stop duration TIME :14:00:00 14:30:00 30 (r LOG : 184.20 155.70 130 (r FDETTH: 411 413	<pre>min Purpose Area cod GrearCond Validity it: 950 m Spe chr 294.00 chr(H/H) chr(H/H) reisht chr(H/H) chr(H/H)</pre>	FOSI1 code: 1 e : 1 .code: 1 code: 1 ed: 3 k CATCH OUR 7 .umbers 544c 44c 44c 44c 106 106 20 400 20 60 80 80 80 80 80 80 80 80 80 8	PION:Lat Long (/HOUR: 4 OF TOT. 0 44.39 19.90 13.27 0.33 4.02 0.22 0.58 0.48 0.48 0.48 0.48 0.48 0.44 100.02 2005 2005 2005 2005 2005 2005 2005	S 54 E 112 588.00 : SAM ION; 9 S 54
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPECIES Chlorophtalmus atlanticus Synegrops microlepis Merluccius polli Trichiurus lepturus Pearbeness belloci SCRECO Perothrisous belloci SCRECO Total DATE:16/ 8/94 GEAR start stop duration TIME :14:00:00 14:30:00 30 (r LOG : 184:20 155:70 1.50 FDETTH: 411 413 Towing dir: 25' Wire ou Sorted: 55 Kg Total catu	<pre>min Purpose</pre>	FOSI1 code: 1 e 1 .code: 1 code: 1 ed: 3 K CATCH OUR 5 .code: 1 ed: 3 .code: 1 ed: 3 .code: 1 .code: 1	PION:Lat Long 	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 3172:70 1.60 PDEPTH: 304 311 Towing dir: 15' Wire of Sorted: 29 Xg Total catu SPECIES Chlorophthalmus atlanticus Synogropa eirolopis Merluccius polli Trichiurus lepturus Pentheroscion whiri NeemotoPricius africanus Pterothriseus belloci SCREC0 Parapenaew longirostris Maleccomphalus occidental/a Lemonema laureys WERADO SCREC0 Total DATE:16/ 8/94 GEAR start stop duration SCREC0 Total DATE:16/ 8/94 GEAR start stop duration TIME :14:00:00 14:10:00 10: LOG : 184:20 195:70 1.50 PDETH: 411 413 BDETTH:	<pre>min Purpose Area cod GearCond Validity 1t: 950 m Spe ch: 294.00 cATCH/H weight n 261.00 127.00 78.00 24.20</pre>	FOSI1 code: 1 e 1 1 .code: 1 code: 1 ed: 3 k CATCH OUR 5 .code: 1 ed: 3 k CATCH 100c 5 100c 100 400 800 800 800 800 800 800 8	<pre>FION:Lat Long i/HOUR: 4 OF TOT. 0 44.39 19.900 13.27 0.33 4.12 4.08 0.92 0.75 0.58 0.48 0.94 100.02 DISCT STAT: FION:Lat Long 1 1.1 Norther 1.1 N</pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 3172:70 1.60 PDEPTH: 304 311 Towing dir: 15' Wire of Sorted: 29 Xg Total catu SPECIES Chlorophthalmus atlanticus Synogropa microlopis Merluccius polli Trichiurus lepturus Pentheroscion whiri NeemotoPricius africanus Pterothrissus belloci SCREC0 Parapenaew longirostris Maleccephalus occidental/a Lemmuema laureys MorCAD2 SCREC0 Total DATE:16/ 8/94 GEAR start stop duration SCREC0 Total DATE:16/ 8/94 GEAR start stop duration Composition 14:10:00 10: 100 : 184:20 19:70 1.50 PDEPTH: 411 413 BDEPTH: 411 413 BDEPTH: 411 413 Sorted: 55 Kg Total catu Species Merluccius poll: Mematocarcinus africanus Centrophorus uyato	<pre>min Purpose Area cod GearCond Validity 12: 950 m Spe ch: 294.00 (CATCH//H weight n 261.00 127.00 78.00 24.20 25.00 588.00</pre>	FOSI1 code: 1 e 1 1 .code: 1 code: 1 ed: 3 k CATCH OUR 5 .code: 1 .code: 1	<pre>FION:Lat Long i/HOUR: 4 OF TOT. 0 44.39 19.900 13.27 0.33 4.12 4.08 0.92 0.75 0.58 0.48 0.48 0.44 100.02 DISCT STAT: FION:Lat Long 1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1</pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPICIES Chlorophthalmus atlanticus Synegtops microlepis Merluccius polli Westocarcinus africanus Seatchersecion muri Westocarcinus africanus SCRECO Total DATE:16/ 8/94 GEAR start stop duration TME :14:00:00 14:30:00 30 (r LOG : 184:20 155:70 1.50 FDEFTH: 411 413 Towing dir: 25' Wire ou Sorted: 55 Kg Total catu SPECIES Merluccius poll:	<pre>min Purpose Area cod GearCond (SearCond) (SearCo</pre>	FoSI1 code: 1 4 1 1 .code: 1 code: 1 ed: 3 k CATCH OUR 7 S14C 514C 514C 514C 1000 20 640 800 800 800 800 800 800 800 8	<pre>TION:Lat Long i/HOUR: 4 OF TOT. 0 44.39 19.90 13.27 0.13.27 0.13.27 0.33 4.12 4.00 2.0.52 0.75 0.58 0.48 0.48 0.44 100.02 NJECT STAT: FION:Lat Long 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPICIES Chlorophthalmus atlanticus Synegtopa microlepis Merluccius polli Merluccius polli Merluccius polli Merluccius pollic Trichlurus lepturus Pentheroscion Muiri Wentocarcinus africanus terroinies arbitanus Merluccius lepturus Pentheroscion scientalis Lesmonema Loreysi Mycrophibaz MoRCA02 SCREC0 Total DATE:16/ 8/94 GEAR start stop duration TIME :14:00:00 14:30:00 30 (r LOG : 184:20 15:70 1.50 FDEFTH: 411 413 Towing dir: 25' Wire ou Sorted: 55 Kg Total catu SPECIES Marluccius poll: Mesatorarcius africanus Centrophorus wysto Trichlurus lepturus SCREC01 Mezumia sequalis	<pre>min Purpose Area cod GearCond Vailalty it: 950 m Spe ch: 294.00 ch: 294.00 ch: 294.00 li:.00 li:.00 li:.00 li:.00 ch: 24.20 li:.00 li:.00 li:.00 li:.00 ch: 24.20 li:.00 li:.00 li:.00 li:.00 ch: 24.20 li:.00 li:.00 li:.00 li:.00 ch: 105.12 ch:l00 li:.10 l</pre>	POSIT code: 1 code: 1 .code: 1 code: 1 <td><pre>FION:Lat </pre></td> <td>S 54 E 112 580.00 : SAM S 54 E 112 J30.24</td>	<pre>FION:Lat </pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDEPTH: 304 311 Towing dir: 15' Wire of Sorted: 29 Xg Total cat: SPECIES Chlorophthalmus atlanticus Synagropa microlopis Merluccius polli Trichiurus lepturus Pentheroscion whiri Nesatocarcinus africanus Pterothriseus belloci SCREC0 DATE:16/ 8/94 GEAR start stop duration Malaccomphalus occidentalia Lemonema laureysi WirCOPHIAGU DATE:16/ 8/94 GEAR start stop duration Total DATE:16/ 8/94 GEAR start stop duration Sorted: 55 Kg Total cat: SPECIES Mariuccius poll: Mesatocarcinus africanus Centrophorus uyato Trichiurus lepturus SCREC0 Nezumia sequelis	<pre>min Purpose Area cod GearCond Validity 12: 950 m Spe ch: 294.00 CATCH/W weight n 127.00 78.00 24.20 24.20 24.20 24.20 24.20 24.20 2.40 2.4</pre>	FOSI1 code: 1 e t 1 .code: 1 code: 1 code: 1 ed: 3 k CATCH OUR 5 440 5440 11040 1006 440 200 440 200 800 800 800 800 800 800 80	<pre>FION:Lat </pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 3172:70 1.60 PDEPTH: 304 311 Towing dir: 15' Wire of Sorted: 29 Xg Total catu SPECIES Chlorophthalmus atlanticus Syngoropa eirolopis Meriuccius polli Trichiurus lepturus Pentheroscion whiri Nematocarcinus africanus Pterothriseus belloci SCREC0 Parapenaeuu longirostris Malaccoephalus occidentalia Laemonema laureysi WyrCTPHIAEN SCREC0 Total DATE:16/ 8/94 GEAR Start stop duration TME :16:00:00 14:00:00 30 (r LOG : 184:20 125.70 1.50 PDETH: 411 413 BOETTH: 411 413 BOE	<pre>min Purpose Area cod GearCond Validity 12: 950 m Spe ch: 294.00 CATCH/U reight n 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 2.60 2.60 0.2.60 2.60 0.00 TVPE: ST No:1 m m min) Purpose Area cod GearCond GearCond Ss8.00 TVPE: ST No:1 n m min) Purpose CATCH/U validity till80 m Spe ch: 165.12 CATCH/I validity 10.02 2.00 0.00 588.00</pre>	FOSIT Code: 1 e t 1 .code: 1 .code: 1 .code: 1 ed: 3 k CATCH OUR 5 .440 5440 11040 100 440 20 100 440 20 800 800 800 800 800 800 800	TION:Lat in*10 i/HOUR: 4 OF TOT. (44.19 19.900 13.27 4.03 4.12 4.08 0.92 0.75 0.58 0.48 0.58	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Towing dir: 15' Wire ou Sorted: 29 Xg Total catu SPECIES Chlorophthalmus atlanticus Syngoropa microlopia Meriuccius polli Trichiurus lepturus Pentheroscion miri Nestaccarcinus africanus Pterothrissus belloci SCREC0 DATE:16/ 8/94 GEAR mcTOPHIDAE DATE:16/ 8/94 GEAR mcTOPHIDAE DATE:16/ 8/94 GEAR SCREC0 Total DATE:16/ 8/94 GEAR screed DATE:16/ 8/94 GEAR screed SCREC0 Total DATE:16/ 8/94 GEAR screed SCREC0	<pre>min Purpose Area cod GearCond Vailaity it: 950 m Spe ch: 294.00 ch: 294.00 ch: 294.00 li7.00 78.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 558.00 558.00 TYPE: BT No:1 m n n n ch: 165.12 ch: 1</pre>	FOSIT code: 1 e 1 .code: 1 .code: 1 code: 1 ed: 3 K CATCH OUR 5 .code: 1 .code: 1 .c	TION:Lat Long i/HOUR: 4 of TOT. (44.39 19.90 13.27 4.08 2.4.08 2.26 0.58 0.48	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 3172:70 1.60 PDETTH: 304 311 Towing dir: 15' Wire ou Sorted: 29 Xg Total catu SPECIES Chlorophthalmus atlanticus Syngoropa microlopis Merluccius polli Trichiurus lepturus Peutheroscion wiri Nesatcoarcinus africanus Peterothrissus belloci SCRECO Nesatcoarcinus africanus Pertothrissus belloci SCRECO Total DATE:16/ 8/94 GEAR MyCTOPHIDAE MORGAO2 SCRECO Total DATE:16/ 8/94 GEAR TIME :100:00 14:30:00 14:00:00 SCRECO Total DATE:16/ 8/94 GEAR MyCTOPHIDAE MyCTOPHIDAE MyCTOPHIDAE MyCTOPHIDAE Sorted: 55 Kg Total catu SPECIES Merluccius poll: Meandcoarcinus africanus Centrophorus uyato Trichiurus lepturus Netonia supoin Scretci so fil Serecius poll: Meandcoarcinus africanus Centrophorus uyato Trichiurus lepturus Netonia supoin Sorted: 55 Kg Total catu SPECIES Merluccius poll: Meandcoarcinus africanus Centrophorus uyato Trichiurus lepturus Netonia sequalis Lamonema laureysi MyRGAO2 Parapenaeus longirostris Seleus polli Synagropa microlepis	<pre>min Purpose Area cod GearCond Vailaity it: 950 m Spe ch: 294.00 ch: 294.00 ch: 294.00 it: 7.00 73.00 49.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 5.60 5.80.00 5.88.00</pre>	FOSIT code: 1 e 1 .code: 1 .code: 1 code: 1 ed: 3 k CATCH OUR 544c 544c 544c 544c 100c 100c 200 400 200 400 200 600 800 800 800 800 800 800 8	TION:Lat IION:Lat IION:Lat IIION: IIION: IIION:Lat IIIION:Lat IIIION:Lat IIION:Lat IIION:Lat IIION:Lat IIION:L	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPICIES Chlorophtalmus atlanticus Synegtops microlepis Merluccius polli Trichiurus leptorus Pertoforine saitenus Pertoforine saitenus Scheod Scheod Softed: 55 Kg Total catus Species Softed: 55 Kg Total catus Species Scheod Sch	<pre>min Purpose Area cod GrantCond Validity Validity So m Spe Chr 294.00 Chr 294.00 Chr 294.00 Chr 294.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 5.40 5.40 5.40 5.40 5.40 5.40 5.40 5.4</pre>	FOSI1 code: 1 4 1 1 .code: 1 code: 1 code: 1 ed: 3 k CATCH S14C 514C 514C 514C 514C 514C 100C 200 830 800 800 800 800 800 800 8	<pre>TION:Lat Long i/HOUR: 4 0F TOT. 0 4 4.39 19.90 13.27 0.132 0.58 0.48 0.48 0.48 0.48 0.44 100.02 0.52 0.75 0.58 0.48 0.44 100:Lat 100:Lat 100:Lat 1100:Lat 1100:Lat 1200:Lat 1100:Lat 1200:Lat 1100:Lat 1200:L</pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (r LOG :171:10 172:70 1.60 PDETTH: 304 111 Tewiny dir: 15' Wire ou Sorted: 29 Kg Total catu SPICIES Chlorophthalmus atlanticus Synegtops microlepis Merluccius polli Trichiurus lepturus Pertothriseus belioci SCRECO Pertothriseus belioci SCRECO Total DATE:16/ 8/94 GEAR start stop duration TME :14:00:00 14:30:00 30 (r) LOG : 184:20 15:70 1.50 FDETTH: 411 4:13 Towing dir: 25' Wire ou Sorted: 55 Kg Total catu SPARenema Longirostris Merluccius poll: Merdiccius poll: Nematocarcinus africanus Centrophorus uyato Trichiurus lepturus SCRECO SCRECO Total lepturus Sorted: 55 Kg Total catu	<pre>min Purpose Area cod GearCond Validity Validity Chr 294.00 Chr 294.00 Chr 294.00 Chr 294.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 2.80 0.00 5.40 5.40 5.40 5.40 5.40 5.40 5.4</pre>	FOSI1 code: 1 4 1 1 .code: 1 code: 1 ed: 3 k CATCH SI4C SI6C SI6C SI6 SI6 SI6 SI6 SI6 SI6 SI6 SI6	<pre>TION:Lat Long i/HOUR: 4 0F TOT. 0 44.39 19.90 13.27 0.13.</pre>	S 54 E 112 580.00 : SAM S 54 E 112 J30.24
TIME :11:41:00 12:11:00 30 (1 LOG :117:10 17:70 1.60 PDEFTH: 304 111 Towing dir: 15' Wire of Sorted: 29 Xg Total cata SPECIES Chlorophthalmus atlanticus Synagropa eirolopis Merluccius polli Trichlurus lepturus Pentheroscion MJril Nematocaricus afficanus Prenthrissus belloci SCREC0 SCREC0 DATE:16/ 8/94 CEAR Maincorephalus Docidentalis Lesmontma lourcysi MyCGOPHIDAE MORGA02 SCREC0 Total DATE:16/ 8/94 CEAR DATE:16/ 8/94 CEAR DATE:16/ 8/94 CEAR Statu flop duration TIME :14:00:00 14:30:00 30 (1) LOG : 184:20 135.70 1.50 FDEFTH: 411 413 Towing dir: 25' Wire out	<pre>min Purpose Area cod GearCond Vailaity it: 950 m Spe ch: 294.00 cATCH/W weight n 261.00 127.00 78.00 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 24.20 5.80.00 558.00 TYPE: BT No:1 m sin) Purpose Area cod Vaica Spi 2.60 558.00 TYPE: BT No:1 m sin) Spi cod S58.00 CATCH/H weight n 176.10 59.10 27.06 17.06 17.06 17.06 17.06 17.06 17.06 17.06 17.06 17.06 17.06 17.06 17.06 17.00 17.06 17.00</pre>	FOSIT Code: 1 -code: 1	TION:Lat IION:Lat IION:Lat IION:Lat IIION: IIION: IIION: IIION:Lat IIIION:Lat IIION:Lat I	S 54 E 112 580.00 : SAM S 54 E 112 J30.24

	. P.		TATION: 9	0
DATE:16/ 8/94 GEAR TY start stop duration	90. 8T No.1	POSI	TION:Lat	S 541
TIME :16:56:00 17:26:00 30 (mir) Purpose	code:	Long	£ 1136
FDEPTH: 181 203	Area cod GearCond Validity	e i .code:	2	
	Validity 650 m Spec			
Sorted: 57 Kg Total catch:			H/HOUR :	965.44
SPECIES	CATCH/H	DUR	V OF TOT.	C SAMP
Pentheroscion mbizi	weight n 530.40		54.94	
Pterothrissus belloci Dentex Angolensis	216.00 89.28	1632 320	22.37 9.25	
Synagrops microlepis Brotula barbata	33.60 31,80	1456 30	3.48	
Trachurus trecae Parapenaeus longirostris	16.20	30 2128	1.68	
Pteroscion peli Scorpaenodes sp.	10.40 4,80	16 32	1.08	
NYCTOPHIDAE Chlorophthalmus atlanticus	4.64	1184	0.48	
Trichiurus lepturus SCRECOI	3.20	32	0.33	
Spicara alta	2.24 1-92	32 16	0.23	
Zenopsis conchifer Coelorinchus coelorhincus	1.60	2 16	0.17	
Total	965.44		100.01	
		P	OJECT STAT	ION: 100
	(PE; PT No:6			S 537 E 1123
TIME :20:00:00 20:32:00 32 (mi) LOG :3223.70 3225.30 1.60) Purpose Area cod	codie: e :	3	
FDEPTH: 495 515 BDEPTH: 495 515	Area cod GearCond Validity			
	1460 m Spe			
Sorted: 25 Kg Total catch	77.46	CATO	H/HOUR :	145-24
SPECIES	CATCH/H	OUR	S OF TOT.	C SAMP
Deanis profundorum	weight n 24.58	umbers 39	16.92	
Aristeus varidens Laemonemo laureysi	20.36	2987	14.02	
Yarella blackfordi	14.06	923	9.68	
Hoplostethus mediterraneus ALEXE02	10.13	163	6.97 5.43	
SHRGL10 CONGRIDAE	6.24	467 84	4.26	
Sardinella maderensis Sardinella aurita	5.46	11		
MORGA02 Geryon maritae	5.29	118	3.64	
Halosaurus ovenii Nematocarcinus africanus	4.50 3.94	39 383	3,10	
STOMIIDAE		,	A	
	2.81	34	1.93	
Trachvrinus scabrus	1.69	23 6	1.16	
Trachyrinus scabrus Etmopterus spinax Trichiurus lepturus Coelorinchus coelorhincus	1.69 1.13 0.56 0.28	23 6 6 5	1.16 0.78 0.39 0.19	
Trachyrinus scabrus Elmopterus spinax Trichiurus lepturus Coelorinchus coelorhincus Lampadena sp.	1.69 1.13 0.56 0.28 0.28	23 6 6	1.16 0.78 0.39 0.19 0.19	
Trachyrinus scabrus Etmopterus spinax Trichiurus lepturus Coelorinchus coelorhincus	1.69 1.13 0.56 0.28	23 6 6 5	1.16 0.78 0.39 0.19	
Trachyrinus scabrus Elmopterus spinax Trichiurus lepturus Coelorinchus coelorhincus Lampadena sp.	1.69 1.13 0.56 0.28 0.28	23 6 6 11	1.16 0.78 0.39 0.19 0.19	
Trachyrinus scabrus Etmopierus spinax Trichiurus lepturus Coelorinchus coelorhincus Lampadens sp. Total " DATE:16/ 8/94 GEAR T	1.69 1.13 0.56 0.28 0.28	23 6 6 11	1.16 0.78 0.39 0.19 0.19 100.01 100.01	10N: 101 S 534
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Trachyrinus scabrus Etmopierus spinax Trichiurus lepturus Coslorinchus coelorhincus Lampadena sp. Totsi	1.69 1.13 0.56 0.28 0.28 145.26 rpE: PT No:6 Purpose Area cod GearCond Validity	23 6 6 11 POS code: e : .code: code:	1.16 0.78 0.39 0.19 100.01 100.01 ROJECT STAT ITION:Lat Long 1 1	10N: 101 S 534
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Trachyrinus scabrus Etmopierus spinax Trichiurus lepturus Coslorinchus coelorhincus Lampadena sp. Total DATE:16/ 8/94 GEAR T start stop duration THE :21:55:00 22:05:00 10 (mi 106 :221:20 22:05:00 10 (mi 106 :220:20 22:05:00 10 (mi 106 :220:20 22:05:00 10 (mi 106 :20:14:00 20:05:00 (mi 106 :20:14:00 20:05:00 (mi 106 :20:14:00 20:05:00 (mi 106 :20:14:00 (mi 106 :20:14:00 (mi 106 :10:05:00 (mi 106):00:00 (mi 106):00	1.69 1.13 0.56 0.28 0.20 1.60 0.80 0.120 0.120 0.120 0.125	233 6667 6667 6677 8008: e.code: e.code: c	1.16 0.78 0.19 0.19 100.01 KOJECT STAT IIION:Lat 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ION: 101 5 534 E 11222 158.46 C SAMP (10N: 102 S 531 E 1125 241.40
Trachyrinus scabrus Etmopierus spinas Trichiurus lepturus Coelorinchus coelorhincus Lampadena sp. Total DATE:16/ 8/94 GEAR T étart stop duration TIME :21:55:00 22:05:00 10 (ml LGG :221:20 23:17:00 0.50 TOEFTH: 595 601 TOWING dir. 15' Wire out Sorted: 26 Kg Total catch SFECIES Sardinella aurita Muplostthus mediterraneus Deania profundorun Geryon muritae ALEEC2 Tarella Diacxfordi Xarella Diacxfordi STOMIDAE Trichiurus lepturus Pterothissus helloci Malosaurus ownii Trichyinus ecabrus Keterocarpus ensifer Total DATE:16/ 8/94 GEAR T Start stop duration TIME :23:14:00 23:44:00 30 (ml LGG :3226.99 2328.70 .80 FDEFTH: 510 460 Towing dir: 100' Wire out Sorted: 62 Kg Total catch	1.69 1.13 0.56 0.28 0.20 1.00 0.20 0.594 4.80 0.12	233 6667 6677 11 11 11 11 11 11 11 11 11 11 11 11 1	1.16 0.78 0.19 0.19 100.01 KOJECT STAT II 100.01 KOJECT STAT II 10.00 ROJECT STAT 10.00 10.00 ROJECT STAT II 0.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 0.00 ROJECT STAT III 0.00 ROJECT STAT III 0.00 RO	10N: 101 5 534 2 11222 158.46 C SAMP 5 531 E 1125 241.40 C SAMP
Trachyrinus scabrus Etmopierus spinas Trichiurus lepturus Coelorinchus corlothincus Lampadena sp. Total DATE:16/ 8/94 GEAR T Start stop duration TIME :21:55:00 22:05:00 10 (ml LGG :221:20 22:05:00 10 (ml LGG :221:20 22:05:00 10 (ml LGG :221:20 22:05:00 10 (ml DEFTH: 595 601 TOWING dir. 15' Wire out Sorted: 26 Kg Total catch SFECIES Sardinella aurita Huplostchus mediterraneus Deania profundorun Geryon muritae ALEKEC2 Varella backfordi Aniteus varidernsis Ariteus varidens STOMITOAE Trichiurus lepturus Heterocarpus ensifer Total DATE:16/ 8/94 GEAR T Start stop duration TIME :23:14:00 23:44:00 10 (ml DEFTH: 510 460 Towing dir: 100' Wire out Sorted: 62 Kg Total catch	1.69 1.13 0.56 0.28 0.28 0.28 0.28 145.26 XPE: PT No:6 Area cod GearCond Validity 1600 m Spe 26.41 CATCH/H Vight n 22.20 16.80 9.60 7.80 7.80 7.80 7.80 7.80 7.80 1.20	233 666 6611 10 POS code: code: code: code: code: code: 188 300 188 300 188 300 188 300 188 300 189 189 189 189 199 199 199 199 199 199	1.16 0.78 0.19 0.19 0.19 100.01 KOJECT STAT TTION:Lat 1 1 1 20F TOT. 3.18 14.010 6.52 6.66 6.66 6.66 6.66 6.66 6.66 6.66	10N: 101 5 534 c 11222 158.46 c SAMP 5 531 E 125 241.40 c SAMP
Trachyrinus scabrus Etmopierus spinax Trichiurus lepturus Coelorinchus coelorhincus Lampadena ap. Total DATE:16/ 8/94 GEAR T EXIT stop duration THE :21:55:00 22:05:00 10 (mi DO THE :21:15:00 22:05:00 10 (mi DO THE :22:05:00 10 (mi DO THE :22:05:00 10 (mi DO THE :22:05:00 10 (mi DO THE :22:05:00 10 (mi DO THE :21:16:00 10 (mi DO THE :21:16:00 LICE STOMIDAE TICHIURS ovenii Trachyrinus achrus Heterocarpus ensifer Total DATE:16/ 8/94 GEAR T TOTAI DATE:16/ 8/94 GEAR T TOTAI	1.69 1.13 0.56 0.28 0.20 1.00 0.20 0.594 4.80 0.12	233 6667 6671 11 11 11 11 11 11 11 11 11 11 11 11 1	1.16 0.78 0.19 0.19 100.01 KOJECT STAT II 100.01 KOJECT STAT II 10.00 ROJECT STAT 10.00 10.00 ROJECT STAT II 0.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 10.00 ROJECT STAT II 0.00 ROJECT STAT III 0.00 ROJECT STAT III 0.00 RO	10N: 101 5 534 2 11222 158.46 C SAMP 5 531 E 125 241.40 C SAMP

DATE:17/ B/94 GEAR TYP	PRO E: PT No:2		TION: 103 ON:Lat S	538
start stop duration TIME :91:20:00 01:51:00 31 (min)		ode: 1	Long E	1120
FDEPTH: 0 Û	Area code GearCond.	: : 2 code: 1		
BDEPTH: 625 719 Towing dir: 260" Wire out:	Validity	code: 1	-10	
Sorted: 94 Kg Total catch:	165.28	CATCH/		19.90
Sorred: 94 kg forar catch.	105.10	citi city		
SPECIES	CATCH/HO	unbers	ог тот. с	SAMP
Trichiurus lepturus	181.55	581	\$6.75	
Sardinella maderensis Sardinella aurita	66.58 52.94	205	20.81	182
Euthynnus alletteratus Scomber japonicus	15.48	12	4.84	
Auxis thazard	1.41	2	0.44	
Total	319.90		100.00	
		PROJ	ECT STATIO	
start stop duration	E: PT No:2		ON:Lat S Long E	
TIME :03:09:00 03:41:00 32 (min) LOG : 260.80 262.80 2.00	Purpose (Area code	code: 1		
FDEPTH: 0 0 BDEPTH: 649 644	GearCond Validity	.code: 1		
Towing dir: 180° Wire out:	140 m Spee	ed: 4 kn	*10	
Sorted: 39 Kg Total catch:	117.00	CATCH/	HOUR: 2	19.38
			05 TOT C	SAMP
		umbers	OF TOT. ⊂	sonr'
Trichiorus lepturus MyCTOPHIDAE	160.31 59.06	321 34121	73.07 26.92	
Total	219.37		99.99	
LOCHX				
		RBO.	ECT STATI	N: 105
	E: PT No:2	POSITI	ION:Lat S	5 540
start stop duration TIME :05:06:00 05:36:00 30 (min)	Purpose	code: 1	Long I	5 1123
LOG : 272.70 274.70 2.90 EDEPTN: 5 5	Area cod GearCond	e ; 2		
BDEPTN: 465 500	Validity	code: 1	- 10	
-	:40 m Spe	••••		184.36
Sorted: 46 Kg Total catch:	92.18	CATCH,	/HOUR:	184.36
SPECIES	CATCH/H		OF TOT. C	SAMP
Sardinella maderensis	weight n 78,60	umbers 280	42.63	185
Sardinelia aurita Trichiurus lepturus	74.40	160	40.36	186
MYCTOPHIDAE	8.56	2780	4.64	
	0.70	2180	4.04	
Total	184.36	2780	100.00	
Total		2780		
	184.36	PRO	100.00 JECT STATI	
DATE:17/ 6/94 GEAR TY: 6 Lart stop duration	184.36 PE: BT No:6	PRO POSIT	100.00 JECT STATI	DN: 106 S 526 E 1135
DATE:17/ 5/94 GEAR TY: Etart stop duration TIME :08:25:00 06:55:00 30 (min LOG :1297.90 1298.80 0.90	184.36 PE: BT No:6) Purpose Area cod	PRO FOSIT code: 3	100.00 JECT STATI	S 526
DATE:17/6/94 GEAR TX ELAIL SLOP duration TIME 08:25:00 08:55:00 0) (min LOG :2297.90 1298.80 0.90 FOEPTH: 250 250	184.36 PE: BT No:6) Purpose Area cod GearCond	PRO FOSIT code: 3 ie : 1 .code: 1	JGO.00 JECT STATI ION:Lat Long	S 526
DATE:17/6/94 GEAR TX ELAIL SLOP duration TIME 08:25:00 08:55:00 0) (min LOG :2297.90 1298.80 0.90 FOEPTH: 250 250	184.36 PE: BT No:6) Purpose Area cod	PRO FOSIT code: 3 ie : 1 .code: 1	JGO.00 JECT STATI ION:Lat Long	S 526
DATE:17/6/94 GEAR TX ELAIL SLOP duration TIME 08:25:00 08:55:00 0) (min LOG :2297.90 1298.80 0.90 FOEPTH: 250 250	184.36 PE: BT No:6) Purpose Area cod GearCond Validity 800 m Spe	PRO FOSIT code: 3 ie : 1 .code: 1	100.00 JECT STATIO ION:Lat Long	S 526
DATK:17/ 5/94 GEAR TXI blart stop duration TIME:08:25:00 06:55:00 10 (MIN LOC 1297;90 1296;86 0.90 FOEFTH: 250 250 SUPFTH: 250 250 Towing dir: 5' Wire out: Sorted: 32 Xg Total catch:	184.36 PE: BT No:6) Purpose Area cod Gearcond Validity 800 m Spe 188.60	PRO POSIT code: 3 i.code: 1 code: 1 ed: 3 k: CATCH	JOO.OO JECT STATI ION:Lat Long n*10 /HOUR:	S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TEL Eart stop duration TIME :08:25:00 06:55:00 10 (Min LOC :1297;90 1298;80 0.90 FOEFTH: 270 253 SUBFTH: 250 253 Towing dir: 5' Wire out: Softed: 32 Xg Total catch: SPECIES	184.36 PE: BT No:6) Purpose Area cod Gearcond Validity 800 m Spe 188.60 CATCH/H weight r	PRO POSIT code: 3 code: 1 code: 1 ed: 3 k: CATCH NUMBERS	JOG. 00 JECT STATI ION:Lat Long n*10 /HOUR: OF TOT. C	S 526 E 1135 377.20
DATE:17/ 5/94 CEAR TY ELAIL SLOP duration TIME :08:25:100 06:55:00 10 (min LOC :1297;90 1296.80 0.90 FOEPTH: 230 250 BUEPTH: 230 250 Toving dir: 5' Wire out: Sorted: 12 Xg Total catch: SPECIES Parapenacus longirostris pentheroecion mbizi	184.36 PE: BT No:6) Purpose Area cod Gearcond Validity 800 m Spe 188.60 CATCH/H weight r 75.00 74.00	PRO. POSIT code: 3 code: 1 code: 1 code: 3 code: 3 code: 3 code: 3 code: 1 code: 1 code: 3 code: 4 code: 4 code: 4 code: 4 code: 4 code: 4 code: 4 code: 5 code: 5 code: 5 code: 5 code: 4 code: 4 code: 4 code: 5 code: 5 code: 5 code: 5 code: 5 code: 5 code: 5 code: 6 code: 6 code: 7 code: 7 cod	100.00 JECT STATIO ION:Lat : Long : n*10 /HOUR: OF TOT. C 19.88 L9.62	S 526 E 1135 377.20
DATE: 17/ 5/94 GEAR TY start stop duration TIME :08:25:00 08:55:00 30 (min fOEPTH: 250 250 DEPTH: 250 250 Towing dir: 5' Wire out: Sorted: 32 Xg Total catch: SPECIES Parapenaeus longirostris Petrothrissus belloci	184.36 PE: BT No:6) Purpose Area cod Gearcond Validity 800 m Spe 188.60 CATCH/H weight r 75.00 74.00 40.00	PRO. POSIT code: 3 code: 1 code: 1 cod	100.00 JECT STATI ION:Let Long h-10 /HOUR: OF TOT. C 19.88 19.62 19.62 19.62	S 526 E 1135 377.20
DATE: 17/ 5/94 GEAR TH Eart stop duration TIME :08: 25:00 03: 55:00 10 (Min LOC : 1297; p0 1296; 50 0.90 FOEFTH: 2:00 250 Towing dir: 5' Wire out: Sorted: 32 Xg Total catch: SPECIES Parapenetus longirostris Petheroscion zbizi Pterothrissus belioci Trichiums iepurum	184.36 PE: BT No:6) Purpose Area cod Gearcond Validity 800 m Spe 188.60 CATCH/H Weight r 75.00 74.00 37.40 37.40	PR0. POSIT code: 3 .code: 1 .code: 1 .code: 3 .code: 4 .code: 5 .code: 4 .code: 5 .code: 4 .code: 5 .code: 5 .c	100.00 JECT STATI ION:Lat Long h*10 /HOUR: OF TOT. C 19.88 19.62 10.60 9.92 8.42	S 526 E 1135 377.20
DATE: 17/ 5/94 GEAR TH Eart stop duration TIME :08: 25:00 03: 55:00 10 (Min LOC : 1297; p0 1296; 50 0.90 FOEFTH: 2:00 250 Towing dir: 5' Wire out: Sorted: 32 Xg Total catch: SPECIES Parapenetus longirostris Petheroscion zbizi Pterothrissus belioci Trichiums iepurum	184.36 PE: BI No:6 PE: BI No:6 Area cod Carcond Validity 800 m Spe 188.60 CATCH/H weight r 74.00 40.00 J7.40 J2.00 J2.00 J2.00	PRO. POSIT code: 3 code: 1 code: 1 code: 3 code: 1 code: 1		S 526 E 1135 377.20
DATE: 17/ 6/94 GEAR TXI BLATE: 5LOP duration TIME: 08:25:100 08:55:00 10 (min fOE TY: 22:72 (22:72) BDEPTH: 22:0 25:0 Towing dir: 5' Wire out: Sorted: 32 Xg Total catch: SPECIES Parapenaeus longirostris Pethteroscion zbizi Pterothrisses belini Pterothrisses belini terothrisses belini terot	184.36 184.36 PE: BT No:60 restroaced restroaced restroaced validity 800 m Spe 188.60 Catch/h weight r 75.00 74.00 19.40	PRO. POSIT code: 3 code: 1 code: 1 code: 1 code: 3 code: 1 code: 1 cod	100.00 JECT STATI ION:Lat Long /HOUR: OF TOT.C 19.88 19.62 19.63 19.65 19.55 1	S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TH start stop duration TIME :08:25:100 08:55:00 30 (min LOG :1297:90 1298:80 0.90 FOEFTH: 250 250 Toving dir: 5' Wire out: Sorted: J2 Xg Total catch: SPECIES Parapenacus longirostris Pentherostion sbisi Prichivis lepturus Controphorus granulosus Heptranchias perio Shimps, mali, non comm. Zenopsis conchifer Synagrops microlepis Drotula barbata	184.36 184.36 PE: BI No:6 () Furpose Area code () Generation () Furpose () Furpose	PRO. POSIT code: 3 :-code: 1 :code: 1 :code: 1 :code: 3 :code: 1 :code: 3 :code: 1 :code: 3 :code: 1 :code: 3 :code: 3 :2 :code: 3 :2 :code: 3 :2 :code: 3 :2 :0 :2 :0 :2 :0 :2 :0 :2 :2 :0 :2 :2 :0 :2 :2 :2 :2 :0 :2 :2 :2 :2 :2 :2 :2 :2 :2 :2 :2 :2 :2		S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TRI Start stop duration TIME :08:25:00 08:55:00 10 (min LOG :1297:90 1298:80 0.90 FOEPTH: 250 250 Toving dir: 5' Wire out: Sorted: 12 Xg Total catch: SPECIES Parapenacus longirostris Pethorescion mbizi Piertohrisaus belloci Trichirus lepturus Centrophorus granulosus Heptranchias perio Shrimps, maali, non comm. Zenopsis conchifer Syngrops microlepis Brotula batbata Hertorkias	184.36 184.36 PE: BT No:6 Purpose Area cond Validity 800 m Spe 188.60 CATCH/H weight r 75.00 75.00 17.40 22.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 13.00 0.00 13.00 0.0	PR0. PODET CODE: 3 i.code: 3 i.code: 1 ed: 3 ki CATCH ii.code: 3 i.code: 3 i.code: 3 i.code: 4 i.code: 4 i.co		S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TRI Start stop duration TIME :08:25:100 08:55:00 30 (min IOG :1297:90 1298:80 0.90 FOEPTH: 250 250 Toving dir: 5' Wire out: Sorted: J2 Xg Total catch: SPECIES Parapenacus longirostris Pentheroscion sbisi Prichius lepturus Centrophorus granulosus Heptianchias perio Shrimps, maali, non comm. Zenopsis conchifer Synagrops microlepis Drotula brbata Merioncias perio Sorted: J2 Xg	184.36 184.36 PE: BT No:6 PE: BT No:6 Prove Area cond Carcely 800 m Spe 188.60 Carcely Weight r 74.00 74.00 74.00 74.00 27.40 2	PR0. POSIT code: 3 i.code: 1 i.code: 1 i.code: 3 i.code: 3 i.code: 3 i.code: 3 i.code: 4 i.code: 4	00.00 JECT STATJI ION:Lat Long n*10 /HOUR: OF TOT. C 19.85 19.62 19.63 19.63 19.63 19.63 19.63 19.63 19.65 10.65 10.55	S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TH Start stop duration TIME :08:25:100 08:55:00 30 (min IOG :1297:90 1298:80 0.90 FOEFTH: 250 250 Toving dir: 5' Wire out: Sorted: J2 Xg Total catch: SPECIES Parapenaeus longirostris Pentheroscion mbisi Prichins lepturus Cenopsis conchifer Synagrops microlepis Brotula brbata Meriorola filos Solemocra africana Peristedion cataphractum	184.36 184.36 PE: BI No:60 rearCod CearCod Validity 800 m Spe 188.60 CARCCH/ Weight r 74.00 40.00 17.40 32.00 32.00 32.00 12.00 0.00 1.000 1.00	PRO. POSIT code: 3 :-code: 1 :-code:	100.00 JECT STATI ION:Lat Long n*10 /NOUR: OF TOT. C 19.88 19.62 19.62 19.62 19.62 19.62 10.60 9.92 8.48 7.26 6.84 4.56 2.229 1.29 1.29 0.62 2.29 1.20 0.00	S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TRI Start stop duration TIME :08:25:100 08:55:00 30 (min IOG :1297:90 1298:80 0.90 FOEPTH: 250 250 Toving dir: 5' Wire out: Sorted: J2 Xg Total catch: SPECIES Parapenacus longirostris Pentheroscion sbisi Prichius lepturus Centrophorus granulosus Heptianchias perio Shrimps, maali, non comm. Zenopsis conchifer Synagrops microlepis Drotula brbata Merioncias perio Sorted: J2 Xg	184.36 184.36 PE: BT No:6 PE: BT No:6 Prove Area cond Carcely 800 m Spe 188.60 Carcely Weight r 74.00 74.00 74.00 74.00 27.40 2	PR0. POSIT code: 3 i.code: 1 i.code: 1 i.code: 3 i.code: 3 i.code: 3 i.code: 3 i.code: 4 i.code: 4	00.00 JECT STATJI ION:Lat Long n*10 /HOUR: OF TOT. C 19.85 19.62 19.63 19.63 19.63 19.63 19.63 19.63 19.65 10.65 10.55	S 526 E 1135 377.20
DATE:17/ 5/94 GEAR TH Start stop duration TIME :08:25:100 08:55:00 30 (min IOG :1297:90 1298:80 0.90 FOEFTH: 250 250 Toving dir: 5' Wire out: Sorted: J2 Xg Total catch: SPECIES Parapenaeus longirostris Pentheroscion mbisi Prichins lepturus Cenopsis conchifer Synagrops microlepis Brotula brbata Meriorola filos Solemocra africana Peristedion cataphractum	184.36 184.36 PE: BI No:60 rearCod CearCod Validity 800 m Spe 188.60 CARCCH/ Weight r 74.00 40.00 17.40 32.00 32.00 32.00 12.00 0.00 1.000 1.00	PRO- POSIT Code: 1 : code:		s 526 1115 377.20 SAMP
DATE: 17/ 5/94 GEAR TXI blart stop duration TIME :008:25:00 00:55:00 10 (min LOG :1297; 50 129 250 BUEPTH: 230 250 Toving dir: 5' Wire out: Sorted: 32 Xg Total catch: SPECIES Parapenaeus longirostris pertheroscion mbizi Pterothrissus belloci Trichirus iepturus Centrophorus granilosus Bhilaps, mali, non comm. Zenopsis conchifer Synagrops microlepis Drotula barbata Herluchus polli MYCTOPHIDAE Illex coindetii Solanocera africana Peristedion cataphractum Total	184.36 184.36 PE: BI No:60 rearCod CearCod Validity 800 m Spe 188.60 CARCCH/ Weight r 74.00 40.00 17.40 32.00 32.00 32.00 12.00 0.00 1.000 1.00	PR0. POSIT code: 1 i.code 2 code: 1 ed: 3 ki cATCH 100R 1250 340 180 5 20 10000 22 860 1050		s 526 1115 377.20 Бамр ом. 107 s 523
DATE: 17/ 8/94 CEAR TY start stop duration TIME :08: 25:100 06: 55:00 10 (min IOC : 1297; 90 1298; 80 0.90 FOEPTH: 230 230 Toving dir: 5' Wire out: Sorted: 12 Xg Total catch: SPECIES Parapenacus longirostris Petherococion mbizi Pterothrissus belloci Trichiurus lepturus Centrophorus granulosus Heptranchias perlo Shrimps, mmali, non comm. Zenopsis conchifer Synsgrops microlepis Brotula brbata Merluccius polli MyCTOPHIDATIS Illex condetii Solemocera africana Peristedion cataphractum Total DATE: 17/ 8/94 CEAR TY start stop duration	184.36 PE: BT No:6) Purpose Area cond Validity 800 m Spe 188.60 CATCH 74.00 74.00 17.40 22.00 17.40 25.80 17.20 8.00 1.20 0.10 1.20 0.00 0.00	PR0. POSIT code: 3 i.code: 1 code:		s 526 1115 377.20 Бамр Ом, 107
DATE: 17/ 8/94 GEAR TXI THE :08:25:00 08:55:00 10 (min THE :08:25:00 08:55:00 10 (min TAE :08:25:00 08:55:00 10 (min TAE :08:25:00 25:00 DEPTH: 22:02 25:00 Towing dir: 5' Wire out: Sorted: 32 Xg Total catch: SPECIES Parapenaeus longirostris petchroscion zbizi Pterothrissus bellati Pterothrissus bellati Pterothrissus bellati Pterothrissus bellati Pterothrissus bellati Pterothrissus bellati Pterothrissus bellati Synagrops microlepis Brotula barbata MyCTOPHIDAE Illex coindtil Solencera africana Peristelion cataphractum Total DATE: 17/ 8/94 GEAR TY SIZE SCON CONTROL SCON SCON SCON SCON SCON SCON SCON SCON	184.36 184.36 PE: BT No:6) Purpose Area cod GearCond Validity 800 m Spe 188.60 CATCH CATCH 74.00 74.00 17.40 22.00 17.40 25.80 1.200	PR0. POSIT code: 3 i.code: 1 code: 1 code: 1 code: 1 ed: 3 k CATCH (60UR % 10250 340 10000 22 863 1000 20 100 10	J00.00 JECT STATI ION:Lat Long +10 /HOUR: OF TOT. C 19.88 19.62 19.62 19.62 19.62 19.62 19.62 19.63 19.62 19.63 19.62 19.63 19.65	s 526 1115 377.20 Бамр ом. 107 s 523
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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.
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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.

Cruise Report No 2/94

PART 2 Survey of the demersal resources 1 to 19 September 1994

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CHAPTER 4	RESULTS FROM THE FISHING ON THE SLOPE
4.1	Deep water shrimp
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Annex I	Swept-area estimates
Annex II	Size compositions of main species
Annex III	Records of fishing stations
Annex IV	Instruments and fishing gear used

1.1 Objectives

The objectives of the survey were discussed at meetings with the Minister of Fisheries and with the Technical Director and other representatives of Instituto de Investigação Pesqueira (IIP) earlier this year.

The objectives of the survey were to:

- Describe the distribution, composition and abundance of major demersal species, with special emphasis on sparids, hake and deep-water shrimp, from Cabinda to Benguela by a swept-area trawl programme.
- Collect stomach samples of *Merluccius polli* for later quantitative laboratory analysis of the contents, with special emphasis on the content of economically important shrimps.
- Map the general hydrographic regime by using a CTD-sonde on all trawl stations all over the survey area and monitor the temperature, salt and oxygen on IIP standard profiles for hydrographical studies.
- Conduct current measurements with current meter mooring.

1.2 Participation

The scientific staff consisted of:

From IIP, Angola:

Antónia Nelumba, Fidel Quilanda, Francisco de Almeida, Dilkarina Azevedo, Guilherme Camarada and Ana de Sousa.

From IMR, Bergen:

Martin Dahl, Tor Gammelsrød, Ole Gullaksen, Reidar Johannessen and Sigbjørn Mehl.

1.3 Narrative

The vessel left Pointe Noire (Congo) in the afternoon of 1 September and steamed southwards to Cabinda. The sampling programme commenced north of the Congo River ouside the closed oil-drilling area with course tracks approximately 20 nm apart, covering the inner, middle and the outer shelf and the slope to 800 m depth. Semi-random swept-area hauls were carried out on the shelf during daytime and on the slope deeper than 400 m during dark hours. CTD-stations were taken at almost all trawl stations in addition to those taken for the standard profiles. Acoustic registration and integration of main groups were done throughout the survey.

The northern part of the survey area, Cabinda-Luanda, was covered from 2 to 10 September. Three hydrographic transects were sampled in the region; Cabinda, Pta. da Moita Seca and N'Zeto. The Cabinda region was only partially covered due to oil-drilling activities. In the area north of Ambriz a 10 nm wide zone along the coast was not covered for security reasons. From 10 to 11 September current measurements were coducted off Pta. das Palmeirinhas. The southern part of the survey area, Luanda - Benguela, was covered from 11 to 19 September, including the hydrographic transects Pta. das Palmeirinhas, Pta. do Morro and Lobito. The survey was completed off Lobito on 19 September and the vessel steamed suthwards to Walvis Bay.

1.4 Survey effort

Figure 1a-b shows the cruise tracks with fishing stations and the hydrographic profiles.

The number of hauls by area and depth interval and number of CTD-stations were:

		Swept-are 200-400m	a hauls 1 400-800m	Total	CTD	Distance surveyed
Cabinda-Luanda	32	20	21	73	73	990 nm
Luanda-Benguela	38	18	16	72	80	840 nm
Total	70	38	37	145	153	1830 nm

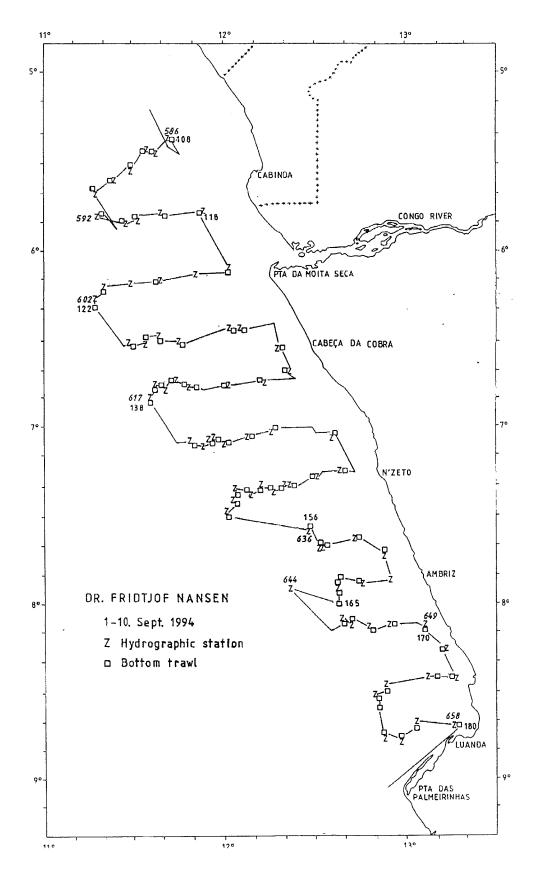


Figure 1a. Cabinda-Luanda. Course tracks with fishing stations and CTD-stations.

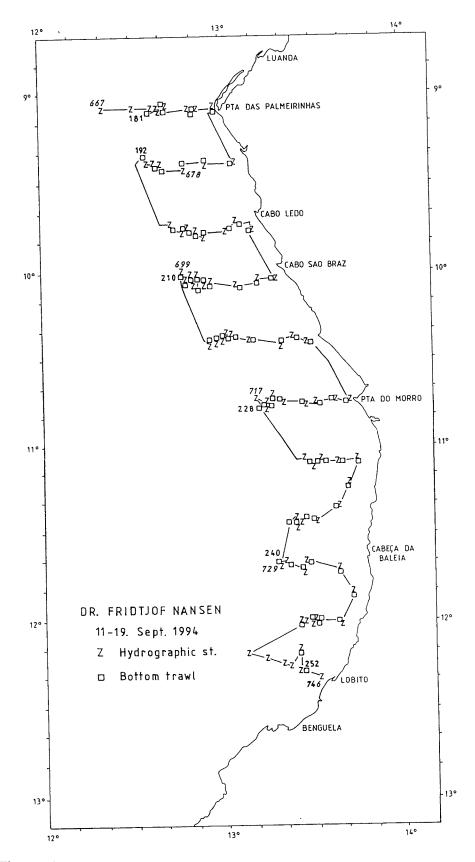


Figure 1b. Luanda-Benguela. Course tracks with fishing stations and CTD-stations.

1.5 Methods

The catches were sampled for species composition by weight and numbers. Length distributions (total length, also for shrimp) were taken for the main species. Biological samples, i.e. length weight, sex and maturity stages, were taken for *M. polli* in connection with stomach sampling. A few samples of *Dentex angolensis* were collected for contamination studies in the areas of highest oil drilling activity. Pooled length frequency distributions (weighted by the catch) of selected species by area, are shown in Annex II. The records of fishing stations are presented in Annex III.

The following areas (nm²) were used in the swept-area biomass estimates:

	Cabinda-Luanda	Luanda-Benguela
0- 50 m	3 023	1 850
50-100 m	2 693	1 730
100-200 m	2 085	1 252
200-300 m	755	500
300-400 m	660	350
400-500 m	540	445
500-600 m	880	450
600-800 m	1 500	900

The bottom trawl has a headline of 31m (float line), footrope 47 m, estimated headline height 5m and distance between wings during towing about 18m. During trawling a 9.5 m long rope was fastened between the wires 150 m in front of the doors giving a constant distance between the doors of 49-50 m. All trawl hauls were monitored by SCANMAR trawl sensors (bottom contact, headline height and distance between the doors) and the actual time the trawl was fishing on the bottom was determined with improved accuracy. For conversion of catch rates to fish densities the area between the wings is assumed to be the effective fishing area i.e. the retention factor q is equal to 1. With the new vessel a new trawl gear was introduced with smaller bobbins. This gear gives better bottom contact and higher catch rates for some bottom dwelling species (e.g. monk and sole). For other species (e.g. hake) the new gear is assumed to have no difference in performance. The trawl, warp and wire dimensions are as with the former vessel. The length of a haul, recorded as distance over bottom was measured by Doppler log on the bottom. There was some mid-water occurrence of hake on the slope during dark hours, and this may have affected (reduced) the swept area-estimates for the slope deeper than 400 m.

A description of the fishing gear, the acoustic instruments and their standard settings is given in Annex IV.

CHAPTER 2 OCEANOGRAPHY

2.1 Instruments and methods

Hydrography

A Seabird 911 CTD plus was used to obtain vertical profiles of temperature, salinity and oxygen. Real time plotting and logging was done using the Seabird Seasave software installed on a PC. The profiles were taken down to a few meters above the bottom. Two Niskin bottles were triggered for water samples on each station, one near the bottom and one near the surface (3m depth). The samples were analyzed for salinity using a Guildline Portasal salinometer, and the oxygen content was determined using the Winkler method. These laboratory values were used for calibration of the CTD after removing obvious outliers.

Using 142 points for the salinity calibration gave a standard error of 0.0085 without any adjustment of CTD values. This was accepted. It should be noted that a better calibration may be obtained using only the bottom samples, where the gradients in T and S usually are smaller.

For oxygen 118 samples were accepted for the calibration. A linear regression gave the following formula for correcting the oxygen values:

$$O_2 = O_{2ctd} * 1.459 + 0.555$$

Applying this formula a standard error of 0.142 was obtained.

Current measurements

Two Aanderaa RCM7 current meters were deployed for about 24 hours to obtain current speed and direction at 2m depth and 45 m depth. The current meters were also equipped with pressure, temperature and conductivity sensors. Thus salinity may also be calculated. The current meters were set to record at 10 min intervals and the data are stored internally. The Data Storing Units were read by a DSU reader using a PC and the P3059 software supplied by Aanderaa Instruments.

Meteorological data

Wind, air temperature, global radiation and sea surface temperature (5 m depth) were logged automatically every nautical mile using an Anderaa meteorological station. The SST were used as additional information for constructing the horizontal distribution maps, and the wind measurements were useful for interpretation of the current measurements.

2.2 **Results**

Hydrography

A total number of 161 hydrographic stations (including 8 in connection with the current measuremenst) were obtained. This net of CTD-stations represents the most extensive hydrographic program ever performed on the Angolan coast, see station map (Fig.1). In addition to the standard sections, a CTD station was taken in connection with all the bottom trawls.

Surface distribution

The horizontal distributions of temperature and salinity are shown in Figs. 2 and 3, respectively. Both parameters have a rather flat structure, typical for the season, except the influence of the Congo River on the salinity distribution. The fresh water from this river seems to be deflected northwards by a near shore current, but the minimum surface salinities found in the outer part of the sections south of the Congo river indicate that the fresh water is transported southward by the Angolan current further off shore. Note that the minimum salinities were found at a distance from the coast, indicating the non stationarity in the region. This area is probably dominated by eddies, which perhaps could be revealed in satellite imageries due to the different optical properties of the river water and sea water.

The near shore surface salinity minimum north of Luanda may be due to a similar northward advection of the water from the Kwanza River just south of Pta das Palmeirinhas, but note the off-shore bound currents observed in the surface layer in the area (see below).

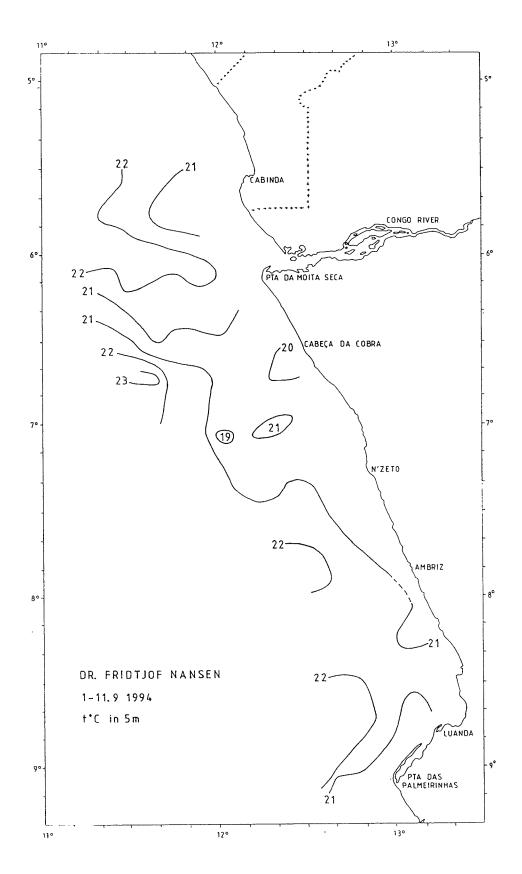


Figure 2a. Horizontal distribution of surface (5m depth) temperature, Cabinda - Luanda.

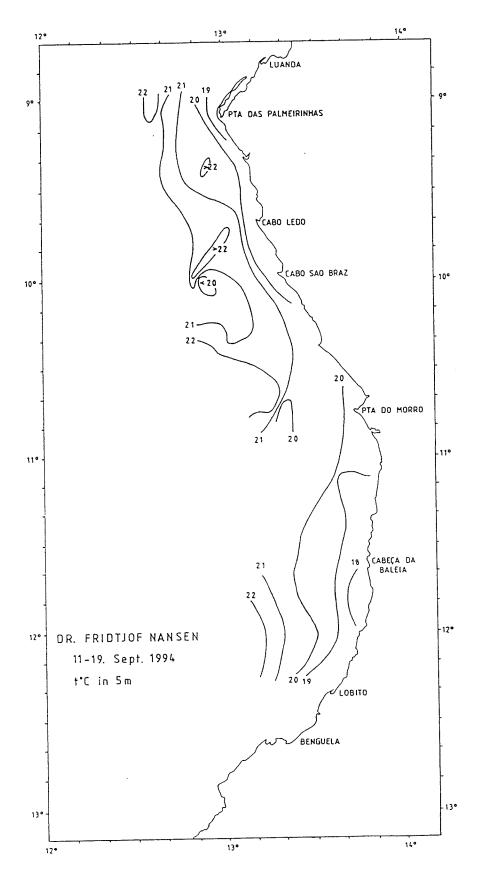


Figure 2b. Horizontal distribution of surface (5m depth) temperature, Luanda - Bebguela.

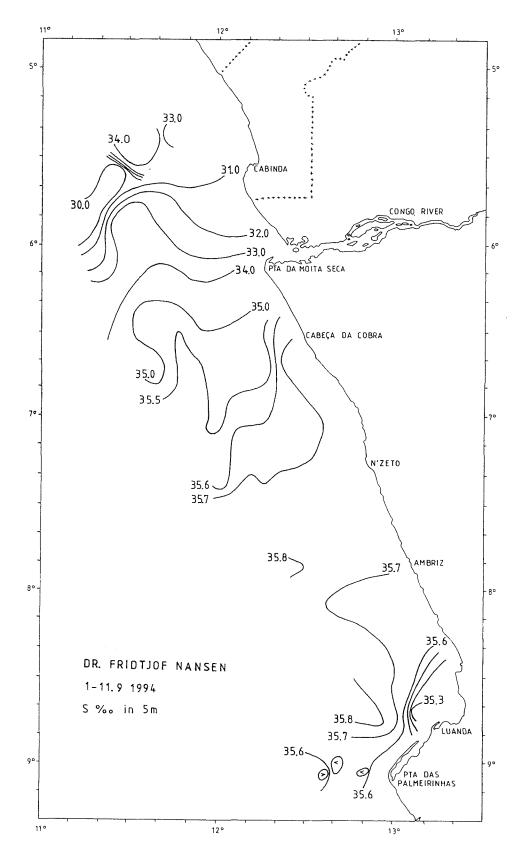


Figure 3a. Horizontal distribution of surface (5m depth) salinity, Cabinda - Luanda.

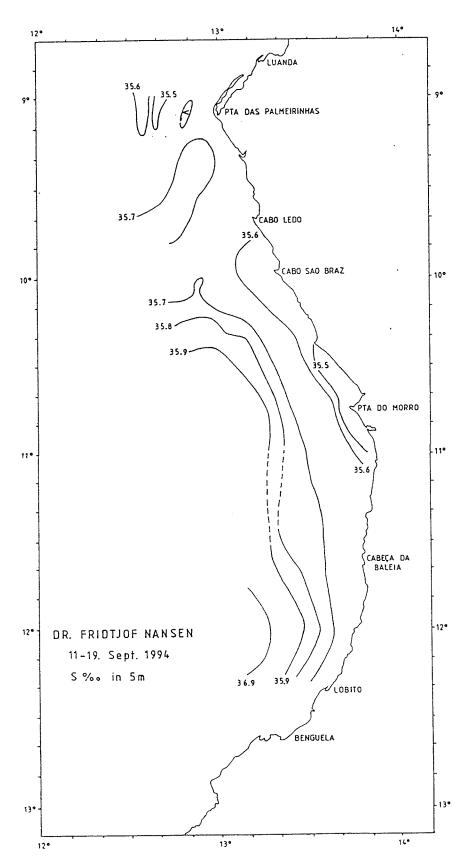


Figure 3b. Horizontal distribution of surface (5m depth) salinity, Luanda - Benguela.

Vertical sections

Several sections were sampled during the cruise (see map Fig.1) and only a subset (the standard sections) are presented here.

Starting in the north, the vertical distributions of temperature, salinity and oxygen are shown in Figs. 4-9. As the density is dominated by the temperature in the region, the maximum temperature is always found near the surface, and the temperature decreases monotonically with depth. A thermocline is often found between 10 and 30 m depth, but note the secondary thermocline at about 300-400 m depth, indicating the influence of different water masses.

A subsurface salinity maximum (S > 35.8) may be traced from the northern part as far south as Pta do Morro (Fig. 8), where it hits the surface. Surface salinity above 36 was found in the Lobito section (Fig. 9).

The oxygen distribution reveals an offshore minimum at about 200-400 m depth. This is the same depth range as the deep thermocline, indicating that the water mass penetrating below the upper layer is more rich in oxygen. At the shelf, the bottom oxygen content is also low, especially from Luanda and southward.

From Pta das Palmeirinhas and southward the isotherms, isohalines and the lines for constant oxygen content tend to tilt upwards towards the shore, indicating upwelling. This is particularly visible in the Pta do Morro section (Fig. 8). However, the low oxygen is also found near the bottom north of Luanda, indicating that biological activity also may contribute to the tilting of the constant oxygen lines.

Current measurements

The current meter rig was anchored at 60 meters water depth near Pta da Palmerinhas at position 9° 05.32' S, 12° 50.63' E, see map Fig.1. The results (Fig. 10) show that both at 45 m and 2 m depth the current is remarkable unidirectional. Surprisingly enough, the current is heading towards West or South-West (although a Northerly current was expected). The current is strongest at 45 m depth, which in the beginning of the registration period revealed speeds above 40 cm/s. Towards the end of the series the speeds at the two levels become more even, but the direction continue to show a difference with the current at 45 m directed towards SW, while the surface flow went approximately westward.

Caution should be taken in drawing conclusion from a short series like this. Thus it is not known if the W and SW currents are representative for the area. One may note however, the absence of a tidal signal, but it should be remembered that the moon phase was near the first quarter at the time of the registration.

In connection with the current registration, a time series of CTD's was taken from the ship near the mooring site (not shown). These measurements show that the opposite trends of the current speeds at the end of the mooring period was associated with a warming of the whole water column. Also the oxygen concentration increased, indicating an advection of warm, oxygen rich water.

On the job training

The Oceanographers, Francisco de Almeida and Fidel Quilanda performed the daily routines for the oceanographic sampling. The vertical sections were analyzed by them. Francisco analyzed most of the horizontal distribution maps. Francisco also analyzed most of the oxygen samples using the Winkler method, while most of the salinity samples were analyzed by Fidel using the Portasal Salinometer. Some training was done on the use of PC for data analyzing.

Fidel wrote a program in QuickBasic for computing the oxygen concentration from the Winkler titration and writing the data to a file. This program is now included in the CTD program library.

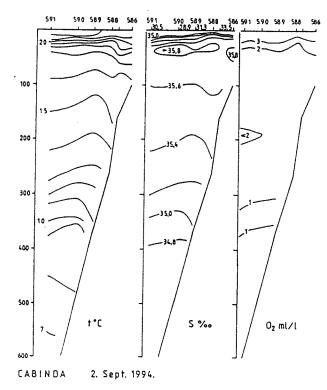


Figure 4. Vertical sections of a) temperature, b) salinity and c) oxygen. Cabinda.

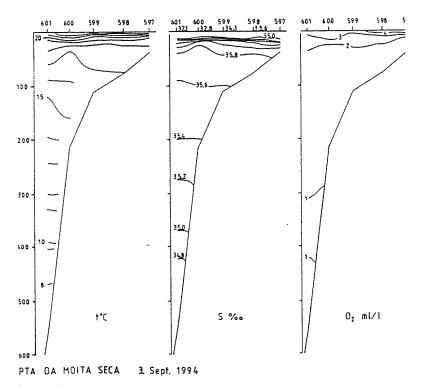


Figure 5. Vertical sections of a) temperature, b) salinity and c) oxygen. Pta da Moita Seca.

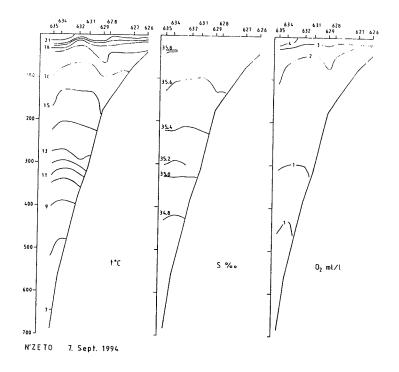


Figure 6. Vertical sections of a) temperature, b) salinity and c) oxygen. N'Zeto.

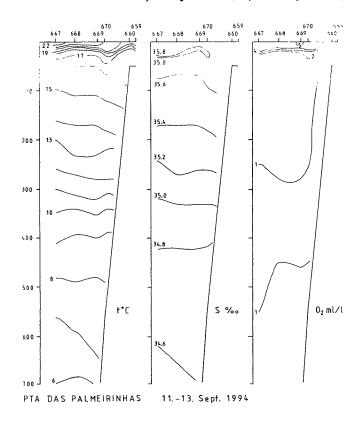


Figure 7. Vertical sections of a) temperature, b) salinity and c) oxygen. Pta das Palmeirhinas.

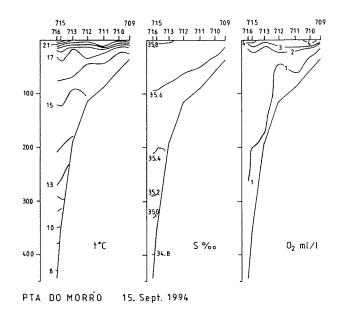


Figure 8. Vertical sections of a) temperature, b) salinity and c) oxygen. Pta do Morro.

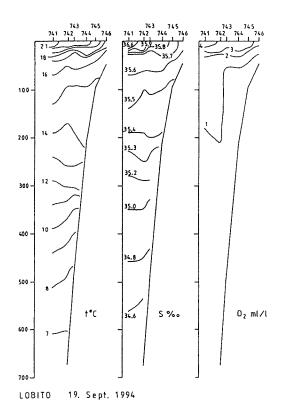


Figure 9. Vertical sections of a) temperature, b) salinity and c) oxygen. Lobito.

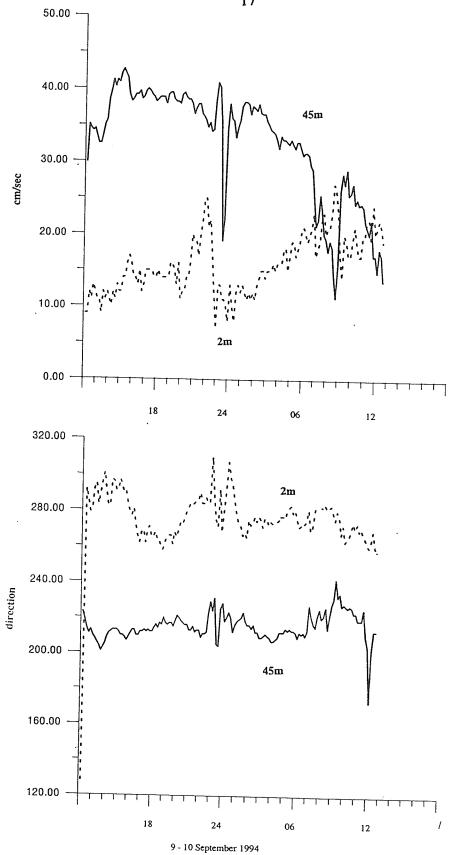


Figure 10. Current measurements Pta das Palmeirhinas: a) Speed, b) Direction.

CHAPTER 3 TRAWL SURVEY: CATCH DISTRIBUTION AND COMPOSITION AND SWEPT-AREA BIOMASS ESTIMATES OF DEMERSAL FISH

The composition of the fish fauna in the catches was studied by dividing the shelf into two parts: an inner shelf, down to 70 m depth and an outer shelf, from 70 to 200 m. In addition, a slope area from 200 m and downwards has been grouped separately. The locations of the trawl stations are shown in Fig. 1. Pooled length distributions (weighted by the catch) of main species are shown in Annex II and records of the catches are presented in Annex III.

In the swept-area biomass estimates for the shelf down to 200 m the depth strata 0-50m, 50-100m and 100-200 m have been applied. In the catch rate analysis and biomass estimates of the slope species the area has been divided into depth zones 100-200 m, 200-300 m, 300-400 m, 400-500m, 500-600 m and 600-800 m. Mean densities by depth strata of the main species, the incidence and the catch distributions are shown in Annex I.

3.1 CABINDA - LUANDA

In this region, 73 swept-area trawl stations were successfully performed, and 51 of them were dayhauls. Due to safety reasons, no trawl hauls were made closer to the shore than 10 nm. This factor should be taken into account when comparing the results from this survey with previous surveys. Another factor is the new type of bottom trawl gear used in the new 'Dr. Fridtjof Nansen', that has proven to be more efficient in catching demersal species living very close to the bottom. The hauls were distributed as follows: 0-50 m : 9; 50-100 m : 11; 100-200 m : 12 and 200-800 m : 41.

Table 1 shows the catch rates by main species groups for the inner shelf, the outer shelf and the slope. "Demersal" comprises the families Sciaenidae, Haemulidae (=Pomadasyidae), Serranidae, Sparidae, Lutjanidae and Merluccidae, while "Pelagic" includes Engraulidae, Clupeidae, Carangidae, Scombridae, Sphyraenidae and Trichiuridae (the latter family is actually mainly benthopelagic). The catch rates of both) these groups were highest on the inner shelf, and the demersal group had higher catch rates in all three depth zones. Compared with similar analysis from survey I and II in 1989, the catch rates obtained during the present survey of demersal and pelagic species are somewhat higher (25-100%) on the inner shelf and slightly lower

(15-25%) on the outer shelf. Sharks and shrimps were most abundant on the slope, while cephalopods occurred in highest catch rates on the inner shelf. The cath rates of the latter group were 5 times higher than in any of the surveys in 1989, *Illex coindetii*, *Todaropsis eblanae* and *Sepia* sp. being most abundant. Fig. 11 shows the distribution of total cephalopods. They were found all over the shelf and most of the slope, but in few concentrations.

Table 1. CABINDA-LUANDA. Catch rates (kg/hour) by main groupsin swept area bottom trawl hauls for the shelf and the slope.

ST.NO.	DEP.	Demersal	Pelagic	Sharks	Shrimps	Cephalopod	Other
118	54	111.54	477.68		5.86	1.40	110.38
119	42	1160.10	34.20			0.72	46.80
127	70	177.76	339.06			142.30	44.88
128	47	60.26	721.44			29.08	8.26
129	24	882.20	159.00			33.00	206.00
130	21	236.14	22.68			43.34	39.12
ī3i	58	274.80				5.16	20.48
145	31	5.94	1.02			70.20	24.00
146	39	122.58				2.16	79.32
160	52	84.78	85.44			1.38	17.28
170	61	81.48	758.18			14.72	25.94
171	38	537.72	90.90			6.70	47.66
172	37	390.10	102.78			4.20	19.98
180	46	000110	2.40			0.12	0.46
100							
MEAN		294.67	199.63		0.42	25.32	49.33

OUTER SHELF 70-200 M

INNER SHELF 0-70 M

ST.NO.	DEP,	Demersal	Pelagic	Sharks	Shrimps	Cephalopod	Other
108	89	82.00	237.18		0.26	0.34	166.18
109	184	144.16	74.72		8.50	0.54	272.48
117	93	203.56	115.70	36.34	8.26	2.46	202.66
120	121	130.58	6.00			9.68	79.86
126	120		181.54			0.35	0.07
132	80	77.52	4.06	3.40		7.12	46.76
133	142	396.12	77.58		0.24	16.08	264.90
142	151	95.92	173.40			9.56	159.88
143	110	118.40	83.86			9.86	24.62
147	84	113.54	669.06			18.76	66.36
148	141	321.85	2.85			3.70	213.05
158	146	84.52	35.64			8.08	61.45
159	80	134.83	19.18			29.16	23.97
161	107	153.96	22.92				78.00
168	195	5.72	60.88		27.90	5.29	244.94
169	105	158.79	38.37			13.83	163.50
173	78	40.88	97.92		10.72	28.62	421.24
179	122	69.78	188.56		****	1.80	465.64
MEAN		129.56	116.08	2.21	3.10	9.18	164.20

ST.NO.	DEP.	Demersal	Pelagic	Sharks	Shrimps	Cephalopod	Other
110	299	44.68	1.50	1.50	7.68	1.58	108.70
111	416	69.00	11.00	718.60	32.72	1.04	54.28
112	571 798			$49.10 \\ 1.16$	22.56 15.34		57.66 98.96
113 114	486	3.96		19.02	45.66		221.28
115	312	150.00	12,48	6.00	27.78	8.16	166.24
116	214	254.00	23.40	4.14	7.82	2.34	315.30
121	554	201.00	20.10	1.26	106.08	0.30	26.52
122	709				1.20	0.78	124.08
123	445	38,00		2.84	2.98		71.32
124	335	94.63	3.63		12.20	27.36	258.18
125	215	36.30	92,94		1.42	10.34	572.32
134	241	59.20	57.98	30.00	7.68	13.40	699.04
135	344	38.26	11.00		13.70	4.76	219.76
136	491	12.60	31.80	22.60	11.12	1.36	143.08
137	615	6.54		3.19	8.15	1.35	220.94
138	769			~	1.52		164.22
139	527	13.50	16 50	0.40	34.90	1.20	223.38
140	326	129.71	46.59		3.63 9.59	5.57	348.11
141 144	269 410	149.23 69.18	37.55 3.80	3.92	9.59	4.63 33.24	1236.13 21.30
144	204	53.01	114.25	77,42	19.16	16.75	998.35
150	246	149.04	72.54	11.42	21.54	6.58	730.20
151	315	344.18	15.18		10.04	5.84	1610.04
152	376	331.86	29.32	60.00	0.92	4.72	130.68
153	456	111.29	1.55	29.61	1.36		80.98
154	563	41.80	0.46	2.18	260.38	0.66	191.38
155	706						183.20
156	397	12.60	1.72	21.00	313.84		32.26
157	264		104.70		10.62		228.06
162	224	5.90	58.18	0.04	26.60	1.90	166.40
163	359	66.98	2.16	0.34	224.40	2.44	40.42
164 165	484 581	74.10 13.66	0.54 0.92	3.30 1.76	206.42 241.04		39.84 46.72
165	495	24.20	0.92	6.00	537.60		35.90
167	355	172.40		0.40	11.28	5.64	84.90
174	354	69.36	2.82	20.64	94.14	15.74	82.34
175	553	5.08		12.00	386.20	LOTIT	27.20
176	666	0.00		4.32	34.92	3.60	413.64
177	453	55.00		9.48	183.96	1.80	54.74
178	253	272.48	29.08	40.22	46.31	1.56	217.27
MEAN		72.48	18.71	28.11	73.28	4.50	262.10

Table 1. Cont. SLOPE 200-800 m

Catch rates of pelagic groups broken down to families (Table 2) are presented just to give some indication of the forms present. Carangids dominated both the inner and outer shelf, *Trachurus trecae* being the most important species. The catch rates on the inner shelf were much higher than those obtained in 1989, and a little lower on the outer shelf. The length distribution and mean length (27 cm) were similar to those found in 1992, while in 1989 mainly juvenile horsemackerel (15 cm) was found. Hairtails were the second most important pelagic family, with *Trichiurus lepturus* as the only species. The catch rates were quite similar to those obtained during survey II 1989.

Hairtail was the dominating pelagic species in the bottom trawl hauls on the slope (not shown in Table 2). Clupeids were much more common in 1989, especially on the inner shelf. During the present survey *Sardinella aurita* only occurred in one catch on the outer shelf and *Ilisha africana* in one haul on the inner shelf. Barracudas were also more common on the inner shelf in 1989, while scombrids were slightly more abundant on the outer shelf in 1994.

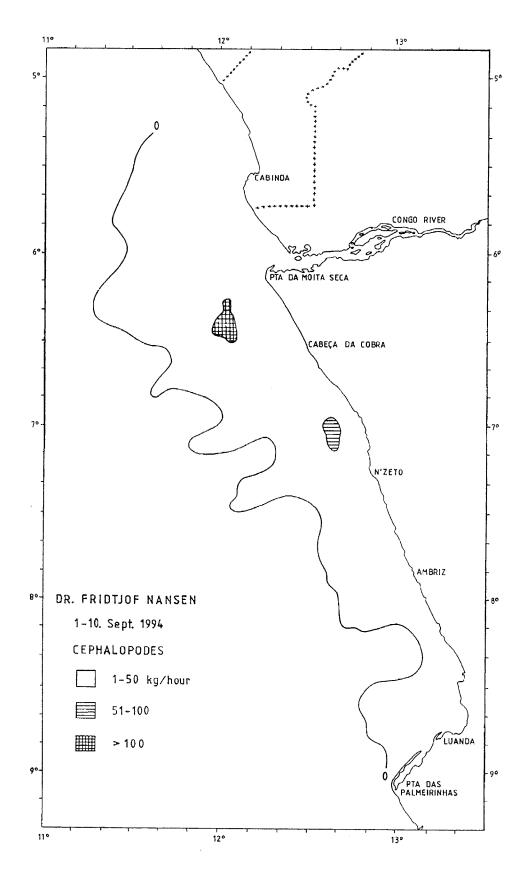


Figure 11. Cabinda - Luanda. Distribution of cephalopods (kg per hour trawling).

Table 2. CABINDA-LUANDA. Catch rates (kg/hour) of main pelagic families in swept-area bottom trawl hauls for the shelf.

INNER SHELF, 0-70 M

ST.NO.	DEP.	Clupeids	Carangids	Barracudas	Scombrids	Hairtails	Other
118	54		289.66	20.16	17,16	150.70	229.18
119	42		0.30	33.90			1207.62
127	70		295.10	4.40	2.70	36.86	364.94
128	47		692.04	4.48		24.92	97.60
129	24	33.6 0	46.80	7.60		71.00	1121.20
130	21		13.80	6.36		2.52	318.60
131	58						300.44
145	31		1.02				100.14
146	39		00.00			2.52	204.06 103.44
160	52		82.92 745.50	0.04	7.14	3.30	122.14
170	61		29.70	2.24	/.14	61.20	592.08
171 172	38		52.98			49.80	414.28
180	37 46		52.90			2.40	0.58
MEAN		2.40	160.70	5.65	1.93	28.94	369.74
DUTER S	HELF	70-200 M					
DUTER S			Carangids	Barracudas	Scombrids	Hairtails	Other
ST.NO.	DEP.	Clupeids		Barracudas			Other 248.78
ST.NO.	DEP.		Carangids 159.46 0.06	Barracudas	Scombrids 12.40	45.86 74.66	
ST.NO.	DEP.	Clupeids	159.46	Barracudas	12.40	45.86 74.66 88.02	248.78 425.68 453.28
ST.NO. 108 109 117 120	DEP. 89 184 93 121	Clupeids	159.46 0.06 27.68 0.94	Barracudas		45.86 74.66 88.02 4.22	248.78 425.68 453.28 220.12
ST.NO. 108 109 117 120 126	DEP. 89 184 93 121 120	Clupeids	159.46 0.06 27.68 0.94 178.36	Barracudas	12.40	45.86 74.66 88.02 4.22 3.18	248.78 425.68 453.28 220.12 0.42
ST.NO. 108 109 117 120 126 132	DEP. 89 184 93 121 120 80	Clupeids	159.46 0.06 27.68 0.94 178.36 1.52	Barracudas	12.40	45.86 74.66 88.02 4.22 3.18 2.54	248.78 425.68 453.28 220.12 0.42 134.80
ST.NO. 108 109 117 120 126 132 133	DEP. 89 184 93 121 120 80 142	Clupeids	159.46 0.06 27.68 0.94 178.36 1.52 56.58	Barracudas	12.40	45.86 74.66 88.02 4.22 3.18 2.54 21.00	248.78 425.68 453.28 220.12 0.42 134.80 677.34
ST.NO. 108 109 117 120 126 132 133 142	DEP. 89 184 93 121 120 80 142 151	Clupeids	159.46 0.06 27.68 0.94 178.36 1.52 56.58 58.40	Barracudas	12.40 0.84	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36
ST.NO. 108 109 117 120 126 132 133 142 143	DEP. 89 184 93 121 120 80 142 151 110	Clupeids	$159.46 \\ 0.06 \\ 27.68 \\ 0.94 \\ 178.36 \\ 1.52 \\ 56.58 \\ 58.40 \\ 62.16 $	Barracudas	12.40	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88
ST.NO. 108 109 117 120 126 132 133 142 143 147	DEP. 89 184 93 121 120 80 142 151 110 84	Clupeids	$159.46 \\ 0.06 \\ 27.68 \\ 0.94 \\ 178.36 \\ 1.52 \\ 56.58 \\ 58.40 \\ 62.16 \\ 646.52 $	Barracudas	12.40 0.84	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66
ST.NO. 108 109 117 120 126 132 133 142 143 147 148	DEP. 89 184 93 121 120 80 142 151 110 84 141	Clupeids	$159.46 \\ 0.06 \\ 27.68 \\ 0.94 \\ 178.36 \\ 1.52 \\ 56.58 \\ 58.40 \\ 62.16 $	Barracudas	12.40 0.84 5.70	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00 22.54	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66 538.60
ST.NO. 108 109 117 120 126 132 133 142 143 147 148 158	DEP. 89 184 93 121 120 80 142 151 110 84 141 146	Clupeids	$\begin{array}{c} 159.46\\ 0.06\\ 27.68\\ 0.94\\ 178.36\\ 1.52\\ 56.58\\ 58.40\\ 62.16\\ 646.52\\ 2.85\\ \end{array}$	Barracudas	12.40 0.84	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00 22.54 35.35	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66 538.60 154.05
ST.NO. 108 109 117 120 126 132 133 142 143 147 148 158 159	DEP. 89 184 93 121 120 80 142 151 110 84 141 146 80	Clupeids	$159.46 \\ 0.06 \\ 27.68 \\ 0.94 \\ 178.36 \\ 1.52 \\ 56.58 \\ 58.40 \\ 62.16 \\ 646.52 \\ 2.85 \\ 0.89$	Barracudas	12.40 0.84 5.70 0.29	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00 22.54	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66 538.60 154.05 187.96
ST.NO. 108 109 117 120 126 132 142 143 147 148 158 159 161	DEP. 89 184 93 121 120 80 142 151 110 84 141 146 80 107	Clupeids	$\begin{array}{c} 159.46\\ 0.06\\ 27.68\\ 0.94\\ 178.36\\ 1.52\\ 56.58\\ 58.40\\ 62.16\\ 646.52\\ 2.85\\ \end{array}$	Barracudas	12.40 0.84 5.70	$\begin{array}{r} 45.86\\74.66\\88.02\\4.22\\3.18\\2.54\\21.00\\115.00\\16.00\\22.54\\35.35\\18.29\end{array}$	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66 538.60 154.05 187.96 231.96
ST.NO. 108 109 117 126 132 142 143 147 148 158 159 161 168	DEP. 89 184 93 121 120 80 142 151 110 84 141 146 80 107 195	Clupeids	$\begin{array}{c} 159.46\\ 0.06\\ 27.68\\ 0.94\\ 178.36\\ 1.52\\ 56.58\\ 58.40\\ 62.16\\ 646.52\\ 2.85\\ 0.89\\ 0.06\\ \end{array}$	Barracudas	12.40 0.84 5.70 0.29	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00 22.54 35.35 18.29 60.88	248.78 425.88 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66 538.60 154.05 187.96 231.96 283.85
ST.NO. 108 109 117 120 126 132 133 142 143 143 147 148 158 159 161 168 169	DEP. 89 184 93 121 120 80 142 151 110 84 141 146 80 107 195 105	Clupeids	159.46 0.06 27.68 0.94 178.36 1.52 56.58 58.40 62.16 646.52 2.85 0.89 0.06 11.37	Barracudas	12.40 0.84 5.70 0.29	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00 22.54 35.35 18.29 60.88 27.00	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.66 538.60 154.05 187.96 231.96 283.85 336.12
ST.NO. 108 109 117 120 132 133 142 143 144 143 147 148 158 159 161 168	DEP. 89 184 93 121 120 80 142 151 110 84 141 146 80 107 195	Clupeids	$\begin{array}{c} 159.46\\ 0.06\\ 27.68\\ 0.94\\ 178.36\\ 1.52\\ 56.58\\ 58.40\\ 62.16\\ 646.52\\ 2.85\\ 0.89\\ 0.06\\ \end{array}$	Barracudas	12.40 0.84 5.70 0.29	45.86 74.66 88.02 4.22 3.18 2.54 21.00 115.00 16.00 22.54 35.35 18.29 60.88	248.78 425.68 453.28 220.12 0.42 134.80 677.34 265.36 152.88 198.60 538.60 154.05 187.96 231.96 283.85

Table 3 shows the catch rates of the most important demersal families. Both on the inner and outer shelf, seabreams were the most common, followed by grunts on the inner shelf and croakers on the outer shelf. The mean catch rate of sparids on the inner shelf was substantially higher than in 1989, but at about the same level on the outer shelf. *Dentex angolensis, D. canariensis,* and *Pagellus bellottii* (red pandora) were the most abundant species. Mean lengths were about the same as observed in previous surveys, but the length distributions were somewhat "broader".

Table 3. CABINDA-LUANDA. Catch rates (kg/hour)of main demersal families in swept-area bottom trawl hauls for the shelf.

ST.NO.	DEP.	Seabreams	Grunts	Croakers	Groupers	Hakes	Other
118 119 127	54 42 70	07 00	2.92	44.44 5.90 49.36	57.00 30.50		595.32
128 129 130	47 24 21	60.26 77.20 212.32 233.00	729.00 9.52	76.00	14.30 41.80		398.00 105.14
131 145 146	31 39	5.60 122.58	20.70		0.34		25.64 95.22 81.48
160 170 171	52 61 38	40.02	38.70 14.92 454.00	71.74	6.06 20.90 5.38	1.14	798.84
172 180	37 46	6.60 141.06	199.80	10.20	37.90	1.14	126.96 2.98
MEAN		152.61	108.28	18.40	15,30	0.08	274.69
OUTER	SHELF	70-200 M					
ST.NO. 108	DEP. 89	Seabreams		Croakers 66.12	Groupers	Hakes 0.10	Other 403.96
ST.NO. 108 109 117 120	DEP. 89 184 93 121	Seabreams		Croakers 66.12 87.78 180.04 9.80	Groupers 33.80 0.78	Hakes 0.10	Other 403.96 356.24 365.42 95.54
ST.NO. 108 109 117 120 126 132 133 142 143 147	DEP. 89 184 93 121 120 80 142 151 110 84	Seabreams 15.78 22.58 23.52 120.00 77.52 74.82 75.00 106.24 110.74		321.30 19.48 12.16 2.80	33.80 0.78 1.44	Hakes 0.10	358.80 342.84 118.34 754.18
ST.NO. 108 109 117 120 126 132 133 142 143 147 148 158 159	DEP. 89 184 93 121 120 80 142 151 110 84 141 146 80	Seabreams 15.78 22.58 23.52 120.00 77.52 74.82 75.00 106.24 110.74 244.00 74.58 134 83		321.30	1.44 8.05 9.94	Hakes 0.10	358.80 342.84 118.34 754.18 219.60 105.17 72.31
ST.NO. 108 109 117 120 126 132 133 142 143 147 148 158	DEP. 89 184 93 121 120 80 142 151 110 84	Seabreams 15.78 22.58 23.52 120.00 77.52 74.82 75.00 106.24 110.74 244.00 74.58 134.83 15.96 3.23		321.30 19.48 12.16 2.80 66.30	1.44 8.05 9.94 138.00	Hakes 0.10 2.49 2.56	$\begin{array}{c} 358.80\\ 342.84\\ 118.34\\ 754.18\\ 219.60\\ 105.17\\ 72.31\\ 100.92\\ 339.01\\ 215.70\\ 558.50\end{array}$

INNER SHELF, 0-70 M

The catch rates of grunts were similar to those in 1989 on the inner shelf, but on the outer shelf this group only occurred on one station in 1994. Like in previous investigations *Brachydeuterus auritus* (big-eye grunt) was very abundant. The mean catch rate of croakers on the inner shelf was about 2/3 of that observed in 1989, while it was almost the double on the outer shelf. The most common croakers were *Miracorvina angolensis* and *Umbrina canariensis*. The catch rates of groupers were also higher than in 1989, *Epinephelus aeneus* being the most abundant.

ST.NO.	DEP.	Seabreams	Hakes	Rose shr.	Str. shr.	Spid.shr.	Other
110	299		39.46	6.68	0.94		118.56
111	416		69.00		2.32	30.40	784.92
112 113	571 798				22.52 9.54		106.80
113	486		3.96		9.54	45.00	$105.92 \\ 240.30$
115	312	62.40	87.60	26.58	1.20	40.00	192.88
116	214	89.90	000	7.82	1.20		509.28
121	554				7.68	98.40	28.08
122	709				0.96		125.10
123	445		38.00		0.96	1.06	75.12
124	335	.	94.63	12.20			289.17
125 134	215 241	36.30 52.52	6.68	1.42 7.68			675.60 800.42
134	344	52.52	38.26	10.90			238.32
136	491		12.60	10.90	8.36	2.76	198.84
137	615		6.54		1.90	5.71	226.02
138	769				1.52		164.22
139	527		13.50		19.90	15.00	224.98
140	326		129.71	1.16			402.74
141	269	19.74	114.54	8.28			1294.57
144 149	410 204	63.50 53.01		19.16			67.94 1206.77
150	246	74.68	69.14	21.54			814.54
151	315	/3:00	344.18	10.04			1631.06
152	376		329.66	20101		0.92	226.92
153	456		111.29		0.97		112.53
154	563		41.80		0.56	259.82	194.68
155	706						183.90
156	397		12.60	10 00	2.88	310.96	54.98
157 162	264 224	3.50	2.40	10.62 26.60			332.76 226.48
163	359	5.00	66.84	0.84	0.42	223.14	45.50
164	484		74.10	0.01	16.64	189.30	44.16
165	581		13.66		1.20	239.76	49.48
166	495		24.20		6.60	531.00	41.90
167	355		172.40	11.28			90.94
174	354		69.36	49.58	C 00	44.28	121.82
175 176	553 666		5.08		6.20 13.32	380.00 21.60	39.20 421.56
177	453		55.00		21.36	162.60	421.56
178	253	196.46	43.52	46.31	6 4 ,00	102.00	320.63
MEAN		15.90	50.97	6.80	3.62	62.48	319.41

Table 4. CABINDA-LUANDA. Catch rates (kg/hour)of main demersal families/species in swept-area bottom trawl hauls for the slope.

Table 4 presents the most important forms present on the slope. The mean catch rates are not directly comparable with those obtained in 1989 because more hauls were done deeper than 600 m during the present survey and for the earlier mentioned differences in gear type. The catch rates of hake, however, are somewhat lower than in 1989. Sparids, on the other hand, were more common in deepwater hauls in 1994, and *D. angolensis* was the dominating sparid found in deepwater stations. The mean catch rate of total shrimp (see Table 1) was at the same level as in 1989. *Nematocarcinus africanus* (spider shrimp) made up 85% of the catches of shrimp, and its mean catch rate actually exceeded that of hake. The commercially important species *Parapenaeus longirostris* (rose shrimp) and *Aristeus varidens* (striped red shrimp) had mean catch rates of about 10 and 5 % respectively of that of the spider shrimp, and *Plesiopenaeus edwardsianus* (scarlet shrimp) was only found in one haul at 709 m depth. Catch rates and biomass estimates of hake and commercially important shrimp species will be further dealt with in section 4.

SLOPE 200-800 M

In Annex I-A swept-area estimates of mean densities based on 32 random bottom trawl hauls are presented for demersal species on the shelf, to 200 m. Most pelagic species are not included in the estimates shown, but separate runs including important pelagic groups have been done in order to make comparisons with previous estimates of these groups. Like in previous surveys (1989,91,92) *B. auritus* was the species with the highest density in the 0-50 m zone, followed by *Dentex* species and *P. bellottii*. In the 50-100 m zone *Synagrops microlepis* (thinlip splitfin) had the highest density, followed by *Pentheroscion mbizi* (blackmout croaker), *P. bellottii* and *Dentex* species. Also in 1992 *S. microlepsis* had the highest density in this zone, while in many previous investigations *B. auritus* was the dominating species found here. If pelagic groups are included, *T. trecae* and *T. lepturus* had the highest densities in the 50-100 m zone. In the deepest shelf zone (100-200 m) *Chlorophthalmus atlanticus* (Atlantic greeneye) had the highest density, closely followed by *D. angolensis*, *U. canariensis* and *S. microlepis*. In previous investigations *C. atlanticus* had been of less imporance and *S. microlepis* more abundant in this zone.

The mean density of demersal species on the shelf was about 12 tonnes/nm², if major pelagic groups are included the mean density increased to 17 tonnes/nm². This result is about the same as what was found in 1989 and 1992, and somewhere in the middle of the result of the two surveys in 1991.

At the bottom of Annex I-A summed densities of the most important species by main groups are presented. Seabreams had the highest mean density, more than the double of grunts. These are followed by croakers, squids and groupers. In most previous investigations grunts have been the dominating group, followed by seabreams and croakers. The mean density of squids is the highest reported for this area, while that of so called "commercial shrimps" is higher than in 1992, in the middle of the results fom 1991 and substantially lower than in 1989.

In Table 5 the densities in each depth zone of some important species and groups are multiplied by the area of the three shallowest depth zones. The results from some previous investigations are also given. This year estimates may be a little biased by the relatively low number of inner shelf trawl hauls, including one large catch of seabreams. The total biomass of demersal valuable groups is about 30% higher than in the two previous surveys, mainly due to a 100% increase in the biomass of seabreams. The present estimate of seabreams is the second largest since the surveys started in 1985, only passed by survey 4/85 (41 800 tonnes). The sum of valuable groups is the third highest in the time series. Groupers and grunts excluding bigeye grunt had about the same biomass as in 1992, while the estimate of croakers is only half of what was found in the two pevious surveys and one of the lowest in the time series.

200 m t	by year/period of invo	estigation.	
Crown/	Moon donaity	Diamaga (tannaa)	

Table 5. Cabinda-Luanda. Mean densities of main groups and biomass estimates for the shelf to

Group/	Mean density		Biomass (tonnes)	
species	1994 (t/nm ²)	1994	1992	1991/II
Seabreams	3.79	32 700	16 000	16 500
Grunts	0.10	900	1 000	2 900
Croakers	1.19	8 500	14 000	15 600
Groupers	1.71	3 500	3 000	940
Sum dem. val.	6.79	45 600	34 000	35 940
Bigeye grunt	1.61	17 100	21 000	19 700
Horse mackerel	2.42	18 500	20 000	12 000
Other carangids	1.49	13 300	4 000	860
Barracudas	0.08	820	1 000	
Hairtail	1.19	8 900	7 000	8300

* excluding big-eye grunt

The estimated biomasses of bigeye grunt, horse mackerel, barracuda and hairtail are similar to those obtained in 1992, while the estimates of other carangids are 3 times higher. *Decapterus rhonchus* and *Selene dorsalis* were the dominating species in this group.

Fig. 12 presents the distribution (kg/hour trawling) of the summed valuable demersal groups. Catch rates of more than 100 kg/hour were obtained from the middle of the inner shelf to the outer part of the shelf, from Cabinda to just north of Luanda, with the highest rates between Cabinda and N'zeto.

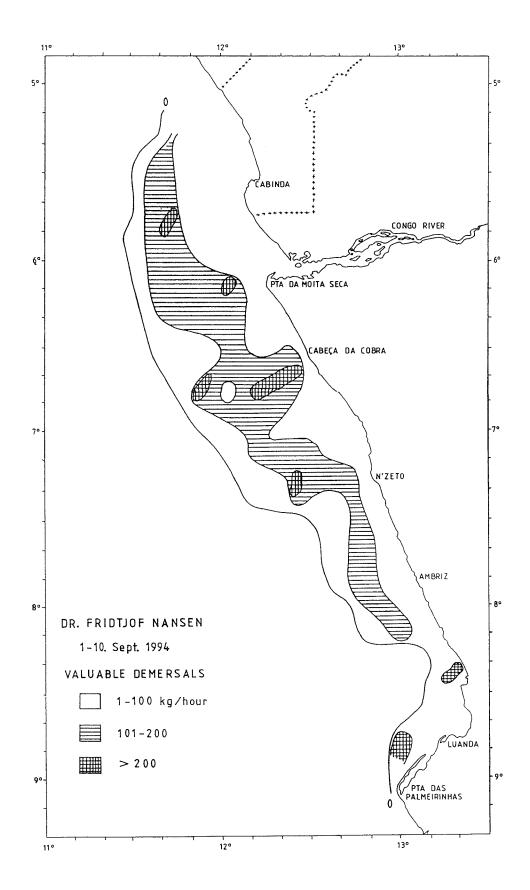


Figure 12. Cabinda - Luanda. Distribution of demersal valuable species (kg per hour trawling).

3.2 Luanda - Benguela

All together 72 swept-area hauls were made in the Luanda-Benguela shelf area. The hauls were distributed as follows: 0-50 m: 11 hauls; 50-100 m: 13 hauls; 100-200 m: 14 hauls and 200-800 m: 34 hauls.

Table 6 presents the catch rates by main groups for the inner shelf, outer shelf and the slope. In contrast with the Cabinda-Luanda region, the pelagic group had the highest catch rates both on the inner and outer shelf, and the catch rates were much higher than in the north. The mean catch rate of the demersal group on the inner shelf was only about 1/5 of that in north, while on the outer shelf it was more than 4 times higher. On the slope, the demersal group was the dominating, and the mean catch rate was about 100 % higher than in the northern region. Compared with similar analysis from survey I and II in 1989, the catch rate of the demersal group is much lower on the inner shelf and at about the same level (II/89) on the outer shelf, while the pelagic group in 1994 had higher catch rates on both shelf areas, especially on the outer. Like in the north cephalopods had the highest catch rate on the inner shelf, and the rates were about the double of those in the north and much higher than the rates obtained in 1989. *Sepia officinalis hierredda* was most abundant on the inner shelf, *Illex coindetii* and *Todaropsis eblanae* on the outer shelf. Fig. 13 shows the distribution of total cephalopods. They were found over most of the region, and with a few more concentrations than in the north. Sharks and shrimps were most abundant on the slope, with somewhat lower catch rates than found in the north.

Cath rates of the most important pelagic families are presented in Table 7. Carangids dominated both the inner shelf, outer shelf and the slope (not shown in the table), and *Trachurus trecae* was the most important species. The catch rates were much higher than in the northern region, especially on the outer shelf, and they were also much higher than the rates obtained in 1989. Like in 1992 both juvenile and adult horse mackerel were caught, with a mean length of 26 cm. In 1989 the catches mainly consisted of juvenile fish. Hairtails were the second most important pelagic family. The catch rates of *Trichiurus lepturus* were lower than in the north on the inner shelf, but much higher on the outer shelf. Compared with 1989, the catch rates were also lower on the inner shelf and substantially higher on the outer shelf. *T. lepturus* also occurred in most hauls on the slope. Scombrids were found in a couple of hauls on the inner shelf and in some more on the outer shelf. The catch rates were low, but higher than those obtained in 1989. *Scomber japonicus* was the dominating species. Like in the Cabinda-Luanda region, clupeids and barracudas were more only found in a few hauls on the inner shelf.

Table 6. LUANDA-BENGUELA. Catch rates (kg/hour) by main groups in swept area bottom trawl hauls for the shelf and the slope.

INNER SHELF, 0-70 M

ST.NO.	DEP.	Demersal	Pelagic	Sharks	Shrimps	Cephalopod	Other
186	41	8.48	80.26			6.26	2.88
187	13	7.64	0.44			395.00	5.84
188	68	386.56	1911.26			18.66	136.50
199	41	261.27	312.23			0.55	166.54
200	26	28.12	165.58			27.58	7.12
201	14	12.27	124.62			13.44	10.83
202	55	33.98	375.26			0.40	45.26
218	50	6.64	4.62			5.06	1.14
219	28	10.30	3.00				0.44
220	44	78.60	51.00		33.00		137.60
221	55	25.00	322.08			10.08	33.12
233	63	82.02	114.68		8.70	7.56	47.88
234	20	7.34	6.82			96.52	10.98
235	44	17.64	1474.80			78.00	
245	44		26.00			0.94	15.30
246	61	44.40	24.98		0.32	8.56	13.28
MEAN		63.14	312.35		2.63	41.79	39.67

OUTER SHELF 70-200 M

ST.NO.	DEP.	Demersal	Pelagic	Sharks	Shrimps	Cephalopod	Other
184	159	302.86	67.38		17.03	4.75	294.44
185	88	143.88	476.16			34.78	53.58
189	112	347,10	45.20			2.20	669.06
196	162	231.43	70.85	12.69		92.19	134.66
197	112	228.66	910.38			38.88	260.76
198	72	361.02	32.44	8.00		9.42	4.44
204	118	1518.08	983.06			8.10	262.80
205	192	137.86	48.32		6.50	34.20	563.74
215	192	142.02		36.60	0.48	3.36	370.92
216	110	145.92	7.56	16.80		5.64	44.88
217	80	403.70	8696.38				899.88
222	90	564.71	1323.83				484.04
223	115	1146.00	2552.00			48.00	45.20
224	190	2232.00	63.36		6.24	7.20	910.56
232	103	169.63	175.86			0.38	338.45
236	75	373.76	15.52			39.92	22.08
243	131	1306.50	474.30			20.70	155.63
244	71	233.70	310.00			37.60	39.30
247	106	42.76	7.60	4.36		2.26	18.74
251	192	1050.34	104.05		13.24	51.56	314.70
252	89	369.68	257.06				70.66
MEAN		545.31	791.49	3.74	2.07	21.01	283.74

SLC	PE	200-	800	м

ST.NO.	DEP.	Demersal	Pelagic	Sharks	Shrimps	Cephalopod	Other
181	740	8.12	14.70		25.76	6.30	340.76
182	571	31.50	13.00	0.66	11.80	1.90	66.00
183	457	73.24	14.32	28.97	30.35	0.87	157.04
190	292	43.30	0.37	68.87	1.73	1.90	496.58
191	340	92.37	6.41		8.69	3.95	153.50
192	551	40.20	0.84	9.72	39.24	5.76	218.28
193	450	129.60		31.18	33.72	12.36	147.42
194	340	160.36	34.36	78.27	57.33	9.16	986.84
195	257	100.99	114.63		88.61	5.31	339.08
206	268	250.00	247.50		4.75	15.00	1186.50
207	362	26.10	5.62		20.80		63.38
208	453	53.74	1.40	50.60	78.10	3.10	105.76
209	555	50.80	7.40	24.40	31.64	2.72	95.68
210	771	10.88	25.60		2.72		167.28
211	541	63.20	11.70	7.02	442.28		85.72
212	451	90.30	43.54	65.70	97.88	4.90	45.74
213	345	65.80	2.10	1.48	52.30	3.78	248.32
225	248	1930.40	46.40		14.00		1749.20
226	352		2.24		2.40	0.04	3.74
227	449	115.80	3.12	1.08	132.24	0.60	83.04
228	549	75.50		6.70	148.40	4.10	29.70
229	475	9.92		4.32	57.12		335.68
230	347	84.00		6.56	8.82	1.88	70.30
231	202	89.28	231.20		12.16	4 00	163.20
237	201	338.98	443.24	•• ••	10.48	4.98	960.92
238	377	34.80		11.44	49.60	0.72	113.44
239	483		0.54	11.38	90.23		265.97 202.60
240	601	00.10		1.20	21.68		199.60
241	393	28.40		7.70	11.00	7.32	940.63
242	206	116.24	239.40		103.65 11.14	18.72	757.22
248	234	1212.28	197.24	1 04	4.35	0.50	358.76
249	334	8.94		1.24		0.50	92.14
250	471	42.19		39.87	28.57		92.14
MEAN		162.95	51.72	13.89	52.53	3.51	340.30

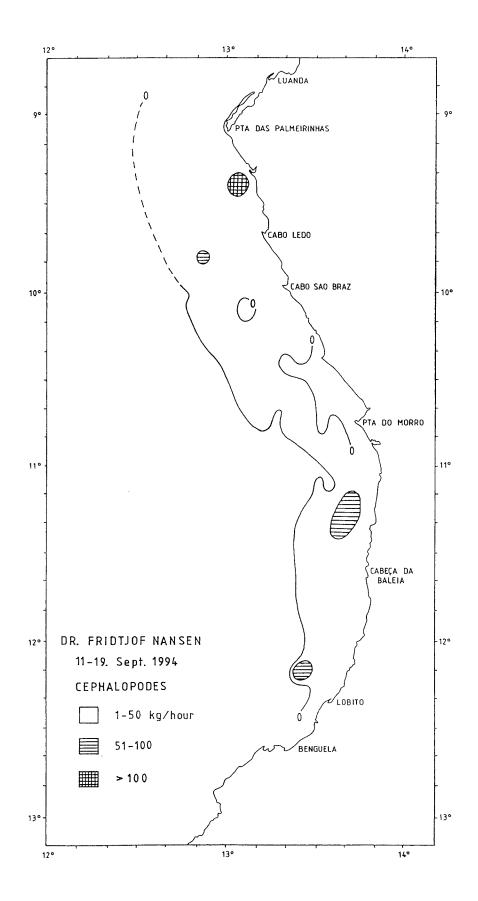


Figure 13. Luanda - Benguela. Distribution of cephalopods (kg per hour trawling).

Table 7. LUANDA-BENGUELA. Catch rates (kg/hour)of main pelagicfamilies in swept-area bottom trawl hauls for the shelf.

ST.NO.	DEP.	Clupeids	Carangids	Barracudas	Scombrids	Hairtails	Other
186	41		79.26	0.90		0.10	17.62
187	13		0.44				408.48
188	68		1844.88		39.72	26.66	541.72
199	41		305.31			6.92	428.36
200	26		130.98			34.60	62.82
201	14	2.33	1.28	114.47		6.54	36.54
202	55	2.10	334.66			38.50	79.64
218	50		4.62				12.84
219	28		3.00				10.74
220	44		24.00		12.20	14.80	249.20
221	55		318.12			3.96	68.20
233	63		102.80			11.88	146.16
234	20	1.18	2.46			3.18	114.84
235	44		1474.80				95.64
245	44		26.00				16.24
246	61		1.28			23.70	66.56
MEAN		0.35	290.87	7.21	3.25	10.68	147.23

OUTER SHELF 70-200 M

ST.NO.	DEP.	Clupeids	Carangids	Barracudas	Scombrids	Hairtails	Other
184	159		4.98			62.40	619.08
185	88		470.50		4.12		233.78
189	112		30.76			14.44	1018.36
196	162		57.38		6.05	7.42	470.97
197	112		867.30		43.08		528.30
198	72		16.36			16.08	382.88
204	118		934.88		48.18		1788.98
205	192		10.04		1.38	36.90	742.30
215	192						553.38
216	110		2.48			5.08	213.24
217	80		3752.42			4943.96	1303.58
222	90		1257.93			65.90	1048.75
223	115		2416.00			136.00	1239.20
224	190		2.20000			63.36	3156.00
232	103		146.02			29.84	508.46
236	75		15.52				435.76
243	131		472.50			1.80	1482.83
244	71		277.00			33.00	310.60
247	106		7.60				68.12
251	192		104.05				1429.84
252	89		257.06				440.34
MEAN			528.61		4.90	257.91	855.94

Table 8. LUANDA-BENGUELA. Catch rates (kg/hour)of main demersalfamilies in swept-area bottom trawl hauls for the shelf.

INNER	SHELF,	0-70	М
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ST.NO.	DEP.	Seabreams	Grunts	Croakers	Groupers	Snappers	Other
186	41	7.90	0.58				89.40
187	13	7.02			0.62		401.28
188	68	301.52	80.24	4.80			2066.42
199	41	186.46	3.55			71.26	479.32
200	26	23.58	4.54				200.28
201	14	1.80	3.21	7.26			148.89
202	55	6.42	23.30	4.26			420.92
218	50	0.64	0.70				16.12
219	28		0.98		1.86		10.90
220	44		75.50	3.10			221.60
221	55	4.56	13.44		7.00		365.28
233	63	75.36		6.48			179.00
234	20	7.34					114.32
235	44		13.44		4.20		1552.80
245	44						42.24
246	61	37.98	5.02	1.40			47.14
MEAN		41.29	14.03	1.71	0.86	4.45	397.24

OUTER SHELF 70-200 M

ST.NO.	DEP.	Seabreams	Grunts	Croakers	Groupers	Hakes	Other
184	159	271.71		23.86		7.29	383.60
185	88	143.88					564.52
189	112	218.78		124.08	3.06	1.18	716.46
196	162	231.43					310.39
197	112	172.26		16.20	40.20		1210.02
198	72	355.66		0.88	4.48		54.30
204	118	822.08		679.50	16.50		1253.96
205	192	92.48		15.76		29.62	652.76
215	192	100.80		7.20	14.70	19.32	411.36
216	110	141.96			3.96		74.88
217	80		403.70				9596.26
222	90	398.38		166.33			1807.87
223	115	1124.40		21.60			2645.20
224	190			1670.40		561.60	987.36
232	103	127.58		32.50	9.55		514.69
236	75	361.92		11.84			77.52
243	131	1306.50					650.63
244	71	217.30	5.30	4.80	6.30		386.90
247	106	42.76					32.96
251	192	952.10		26.94		71.30	483.55
252	89	301.16		68.52			327.72
MEAN		351.58	19.48	136.69	4.70	32.87	1102.04

Table 8 presents the catch rates of the most important demersal families. Like in the northern region seabreams were the most common both on the inner shelf and outer shelf. The catch rates of seabreams on the inner shelf were only about 25% of those in the north, while on the outer shelf the mean rate was almost 5 times higher in the south. Compared with 1989, the catch rates on the inner shelf are comparable to those obtained in 1989, while the rate on the outer shelf was 3 times as high in 1994. *Pagellus bellottii* and *Dentex canariensis* were the most abundant species on the inner shelf, while *Dentex macrophthalmus* dominated on the outer shelf (75% of the seabream catches), followed by *D. angolensis* and *P. bellottii*. Mean lengths and length distributions were similar to those observed in previous surveys.

Brachydeuterus auritus (big-eye grunt) was most abundant on the inner shelf and was only caught in two hauls on the outer shelf. The catch rates on the inner shelf were lower than in the northern region, and much lower than those found in 1989, both on the inner and outer shelf.

The most common croakers were Umbrina canariensis, on the inner shelf, and Pentheroscion mbizi and Atractoscion aequidens on the outer shelf.

Groupers were less abundant than in the Cabinda - Luanda region, and the catch rates were lower than in 1989. *Epinephelus aeneus* and *E. goreensis* were the most abundant groupers. Snappers (*Litjanus goreensis* and *L. endecacanthus*) only occurred on one station on the inner shelf.

Table 9 presents the most important forms on the slope. More deep-water hauls (> 600m) were done during the present survey than in 1989, so the results are not directly comparable. Furthermore, differences in the bottom trawl now used, more efficient in catching those species very close to the bottom, should also be taken into account when comparing present and earlier results. Seabreams, mainly *D. macrophthalmus*, occurred in stations shallower than 250 m. The catch rates were similar to those obtained in survey I 1989. Benguela hake (*M. polli*) was caught in most of the slope stations. The mean catch rate was 40% higher than in the north, but somewhat lower than in both 1989 surveys. Total shrimp (see Table 6) had a lower mean catch rate than in the north, while the rate was at the same level as in survey II 1989. *Nematocarcinus africanus* made up over 60% of the shrimp cathes. The more important *Parapenaeus longirostris* and *Aristeus varidens* had mean catch rates of about 35 and 28% respectively of that of the spider shrimp. Small catches (< 5 kg/h) of *Plesiopenaeus edwardsianus* were obtained in a few stations from 350 m and downwards at similar rates as in survey III 1989. Hake and important shrimps are further described in section 4.

ST.NO.	DEP.	Seabreams	Hakes	Rose shr.	Str. shr.	Spid. shr.	Other
181	740		8.12		25.34		362.18
182	571		31.50		4.30	7.00	82.06
183	457		73.24		30.35		201.20
190	292		43.30		0.63		568.82
191	340		92.37	5.31	2.15	17 10	165.09
192	551		40.20		21.84	17.40	234.60
193	450		129.60		33.06		191.62
194	340		160.36	57.33			1108.63
195	257	22.36	78.63	88.61			459.02
206	268			4.75			1699.00
207	362		26.10	0.90	40.00	19.90	69.00
208	453		53.74		48.60	29.00	161.36
209	555		50.80		3.64	28.00	130.20
210	771		8.40		2.00	126 00	196.08
211	541		63.20		4.82	436.80 68.96	105.10
212	451		90.30	E0 20	28.92	68.96	159.88 255.68
213	345		65.80	52.30			3713.60
225	248 352		12.40	14.00 0.30		2.02	6.10
226	352 449		115.80	0.30	10.08	121.80	88.20
227	449 549		75.50		39.40	109.00	40.50
228 229	475		9.92		59.40	57.12	340.00
229	475 347		9.92 84.00	6.02		57.12	81.54
230	202	42.88	46.40	12.16			394.40
231	202	42.88	12.24	10.48			1595.88
238	377	140.00	34.80	10.40	3.20	46.40	125.60
239	483		34.00		2.85	86.03	279.24
239	485				3.76	17.52	204.20
240	393		26.90		5.70	6.50	213.30
242	206	30.89	85.35	100.80		2.85	1187.35
248	234	479.78	708.96	11.14		2.00	996.72
249	334	4, 5, 70	8.94	4.10		0.25	360.50
250	471		42.19	7+10	28.57	0.20	132.01
MEAN		21.69	69.06	11.16	8.89	32.02	482.08

Table 9. LUANDA-BENGUELA. Catch rates (kg/hour)of main demersal families/species in swept-area bottom trawl hauls for the slope.

In Annex I-B swept-area estimates based on 37 bottom trawl hauls are presented for demersal species on the shelf. In the 0-50 m zone Sepia officinalis hierredda had the highest density, followed by Dentex canariensis, Synagrops microlepis and Brachydeuterus auritus. In the northern area, as well as in most previous investigations, B. auritus was the dominating species in the shallowest zone. S. microlepis had the highest density between 50 and 100 m, followed by D. macrophthalmus, P. bellottii and B. auritus. Also in 1992 S. microlepis had the highest density in this zone, while in earlier investigations B. auritus was the dominating demersal species. D. macrophthalmus had the highest density in the deepest shelf zone, almost three times higher than Pentheroscion mbizi, which came second. Then followed Chlorophthalmus atlanticus, Umbrina canariensis and S. microlepis.

In previous investigations S. microlepis often had the highest density in the 100-200 m zone, but D. macrophthalmus has normally been abundant. If pelagic species are included, T. trecae had the highest density in all three shelf zones, and T. lepturus came second in the 50-100 m zone.

The mean density of demersal species on the shelf was about 18 tonnes/ nm^2 , which is somewhere in the middle of the results of survey I and II in 1989 and 50% higher than the mean density for

the Cabinda-Luanda region. If pelagic groups are included, the mean density increases to almost 38 tonnes/nm^2 . This is almost exactly the same as found in 1992, and about 25% higher than the results of the two surveys in 1991.

Summed densities of the most important species by main groups are presented at the bottom of Annex I-B. Like in the northern region seabreams had the highest density, more than the double of croakers. Then came squids, grunts and groupers. In most previous investigations grunts has been the dominating group, followed by seabreams and croakers. The mean density of squids is the highest reported, more than the double of what was found in 1992. "Commercial shrimp" had lower mean density than in 1989, but higher than in 1991 and 1992.

Table 10 summarizes the mean densities of some important groups, and biomass estimates for 1994 and some previous investigations are also presented.

Group/	Density (t/nm ²)	Biomass (tonnes)				
species	1994	1994	1992	1991		
Seabreams	7.30	28 730	28 000	24 580		
Grunts	0.02	120	2 000	5 500		
Croakers	2.65	9 250	2 000	19 000		
Groupers	0.11	400	1 000	1 000		
Sum dem. val.	10.08	38 500	33 000	50 080		
Bigeye grunt	0.55	2 990	52 000	18 500		
Horse mackerel	13.74	65 100	75 000	48 500		
Other carangids	0.46	2 790	1 640	290		
Barracudas	0.12	740				
Hairtail	5.02	26 200	1 300	4100		

Table 10. Luanda-Benguela. Mean densities and biomass estimates	; by	main groups over the shelf
to 200 m by year of investigation.		

* excluding big-eye grunt

The estimated total biomass of demersal valuable groups is 17% higher than in 1992. Seabreams made up more than 70% of the biomass of demersal valuable groups, and their biomass was the highest measured in the time series, slightly higher than in 1992. *D. macrophthalmus* contributed almost 70% to the biomass of seabreams.

Croakers had less than half of the biomass found in 1991, but much higher than in 1992. The biomass estimates of groupers and grunts excluding big-eye grunt were lower than in the two previous investigations, that of grunts is the lowest in the time series.

The estimated biomass of big-eye grunt is also the lowest in the time series. A big haul of about 25 tonnes was not included in the swept-area estimates because it was difficult to bring the catch on deck for precise registration. Big-eye grunt made up over 70% of the total catch, and including this haul, it would have increased the biomass estimate to about 250.000 tonnes.

The biomass estimate of Cunene horse mackerel in the bottom layer is somewhat lower than in 1992 but well above the result from 1991. Hairtail came out with the highest biomass estimated in the time series. A catch of 5 tonnes contributed 90% to the hairtail biomass. Other carangids and barracudas were also more abundant than in previous investigations.

Fig. 14 shows the distribution of the summed demersal valuable groups. Catches of more than 100 kg/hour were obtained from the middle of the inner shelf to the beginning of the slope (250m) over most of the region. There were also large areas with catch rates > 200 kg/hour.

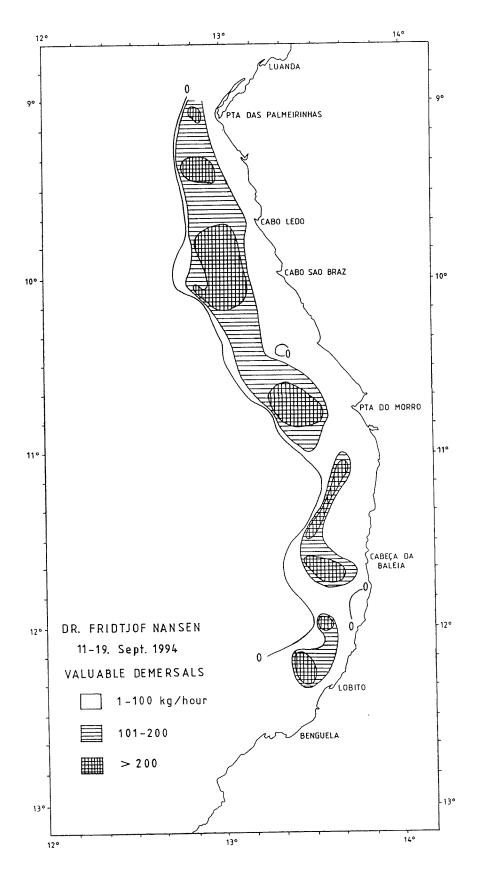


Figure 14. Luanda - Benguela. Distribution of demersal valuable species (kg per hour trawling).

3.3 Review of results

In the category high-value demersal fish we include species of seabreams, croakers, grunts (excluding the bigeye grunt), groupers etc. that constitute the most valuable food fish. Table 11 shows the results of present and previous surveys. The present estimate for the Benguela - Cabinda region is one of the highest in the time series, about 25% higher than the 1992 estimate. However, the difference in the bottom trawl gear used in the new 'Dr. Fridtjof Nansen', probably more efficient than the one previously used, might be critical. Tests on the differences betwen the two gear types are planned for the near future and present results and comparisons should be evaluated again in the light of the information gained from the calibration experiments.

Table 11. Valuable demersal fish. Mean biomass estimates (1000 tonnes) by survey and region.

Survey	Cunene- Benguela	Benguela- Luanda	Luanda- Cabinda	Benguela- Cabinda	Total
1/85-4/85	N.S.	N.S.	48.8	-	-
1/86-2/86	15.6	21.2	38.3	59.5	78.4
1/89-2/89	28.2	17.9	25.5	43.4	75.1
3/89	N.S.	N . S .	31.7	-	-
Nov/89					68.0*
1/91	26.4	15.0	15.9	30.9	57.3
2/91	36.4	50.1	35.9	86.0	122.4
1/92	47.7	33.0	34.0	67.0	114.7
1/94	N.S.	38.5	45.6	84.1	-

* From GOA survey, seabreams only.

CHAPTER 4 RESULTS FROM THE FISHING ON THE SLOPE

The slope off Cabinda-Luanda was covered with 53 swept-area hauls with the following distribution: 100-200 m: 12 hauls; 200-300 m: 10 hauls; 300-400 m: 10 hauls; 400-500 m: 9 hauls; 500-600 m: 6 hauls and 600-800 m: 6 hauls. The slope from Luanda to Benguela was covered with 47 hauls and these were distributed as follows: 100-200 m: 14 hauls; 200-300 m: 8 hauls; 300-400 m: 9 hauls; 400-500 m: 8 hauls; 500- 600 m: 5 hauls and 600-800 m: 3 hauls.

The swept-area estimates of the main species caught, by depth intervals are given in Annex I A-D and pooled length distributions (TL) for hake and important shrimps (by sex) are shown in Annex II.

4.1 Deep-water shrimp

Table 12 shows the catch rates of *Parapenaeus longirostris* (rose shrimp) by region and depth range, and catch rates from previous investigations are given for comparisons. Like in previous investigations the highest catch rates were obtained in the 200-300 m depth zone. In the Cabinda - Luanda region rose shrimp was found from the outer part of the shelf to about 350 m depth (Fig. 15), with the best cath rates in the southern part. The overall mean catch rate increased by 25% from 1992 to 1994 due to much better catches in the 300-400 m zone, but still the rate is low compared to 1985/86. The rates of occurrence were similar to those from 1992, and the three highest catch rates were 28, 46 and 50 kg/h. Mean length of both males and females is about 1 cm longer than in 1992.

In the Luanda - Benguela region (Fig. 16) rose shrimp had a similar distribution as in the north, with a few areas with catch rates > 20 kg/hour. The catch rates were higher than in 1992 and 1991, especially in the 300-400 m zone, where also the rate of occurrence was higher. However, the mean catch rate was still over 30% lower than the average mean rate for 1985/89. The three highest catch rates were 57, 89 and 101 kg/h, which is above the 1992-level. Mean lengths of both sexes were similar to those found in the northern region and about 0.5 cm longer than in 1992.

Mean catch rates of *Aristeus varidens* (striped red shrimp) are presented in Table 13. Fig. 17 shows the distribution of striped shrimp in the Cabinda - Luanda region. It was found over most

concentrations with catches over 20 kg/h. Like in 1992 the mean catch rate was highest in the 500-600 m depth zone, and the overall mean catch rate increased by 25% due to better catches

Area/		Year/period of investigation								
depth	1985/86	1989	1991/I	1992	1994					
Cabinda-Luanda 100-200 m			-	2	3					
150-250 m 200-300 m 250-350 m	36 19	21 11	9	18	15					
300-400 m Mean	29	12	2	- 8	12 10					
Luanda-Benguela 100-200 m			-	2	3					
150-250 m 200-300 m	16	29	17	26	30					
250-350 m 300-400 m	30	17	2	1	14					
Mean	22	19			13					

Table 12. Rose shrimp. Mean catch rates (kg/hour) by region, depth range and year/period of investigation.

Table 13. Striped shrimp. Mean catch rates (kg/hour) by region, depth range and year/per. of investigation.

Area/	Year/period of investigation										
depth	1985/86	1989	1991/I	1992	1994						
Cabinda-Luanda 300-400 m 400-500 m 500-600 m 600-800 m Mean	7	4	- 4	1 6 7 4 4	+ 6 10 5 5						
Luanda-Benguela 300-400 m 400-500 m 500-600 m 600-800 m Mean	15	7	2 22	1 2 5 15 6	1 23 15 3 12						

in this zone. The rate is, however, 30% lower than that found in 1985/86. The rates of occurrence were about the same as in 1992, and the three highest catches (20, 21 and 23 kg/h) were slightly above the 1992 level.

The mean catch rate of *Aristeus varidens* in the Luanda - Benguela region was much higher than in the north and the double of that obtained in 1992, almost back at the 1985/86 level. Catch rates were highest in the 400-500 m zone, while in 1992 the best catches were done in the deepest zone (600-800 m). Rates of occurrence were also higher than in 1992, as well as the three highest catch rates (33, 39 and 49 kg/h). The mean length of males was about 1 cm longer than in 1992 and females were 0.7 cm longer. Fig. 18 shows the distribution of striped red shrimp in the Luanda -Benguela region. It was found over most of the region, from about 350 m to beyond 770 m depth. The best catches were obtained between Pta das Palmeirinhas and Pta do Morro.

Biomass estimates of commercially important shrimps are obtained the same way as for fish; by multiplying the densities in the main depth zones where each species is distributed (see Tables 12 - 13 and Annex I) by the area of each depth zone. The results are presented in Table 14, and the biomasses should be treated as indices. The biomasses of rose shrimp and stripped red shrimp in the Cabinda - Luanda region have increased by 80 and 18% respectively from 1992 to 1994. In the Luanda - Benguela region the biomass estimates were 14 and 56% higher than in 1992 for red and striped shrimp respectively. The total biomass of rose shrimp is not directly comparable with the results from 1985/86. The biomass estimate of striped shrimp is not directly comparable with the results from 1985/86 because of few deepwater hauls in the first investigations. During the present survey only one catch of scarlet shrimp was made in the northern region and no biomass estimate is done. In the southern region a few more catches were done, but the biomass is low compared to previous results. Compared with 1992 the total biomass estimate of important shrimps in the Cabinda - Benguela area increased by over 30% and is now on the 1989 level.

Region/	Year / period of investigation								
species	1985/86	1989	1992	1994					
Cabinda-Luanda - Rose shrimp - Striped red shr. - Scarlet shrimp	2500 230 160		615 515 130	1110 610 +					
Luanda-Benguela - Rose shrimp - Striped red shr. - Scarlet shrimp	1300 620 100		680 570 60	710 890 25					
Total	4910	3300	2570	3410					

Table 14. Biomass (tonnes) of commercial deep water shrimps by region and year/period of investigation.

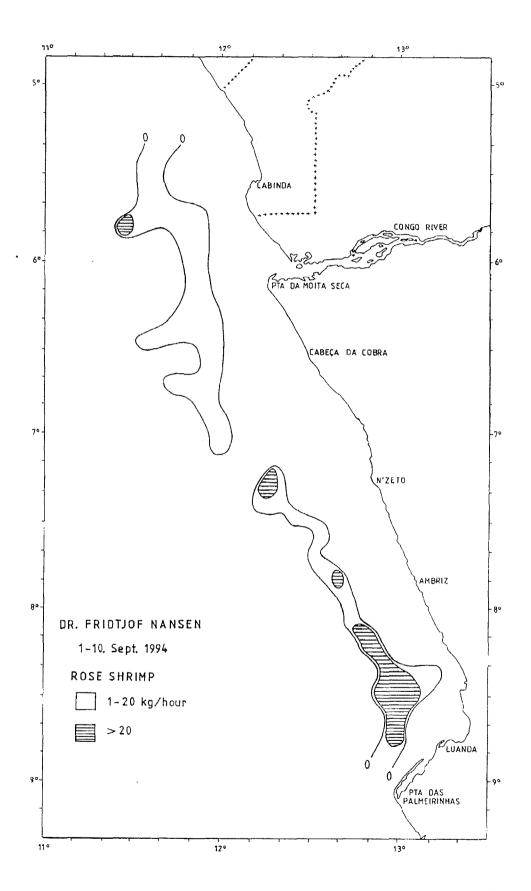


Figure 15. Cabinda - Luanda. Distribution of Parapenaeus longirostris (kg per hour trawling).

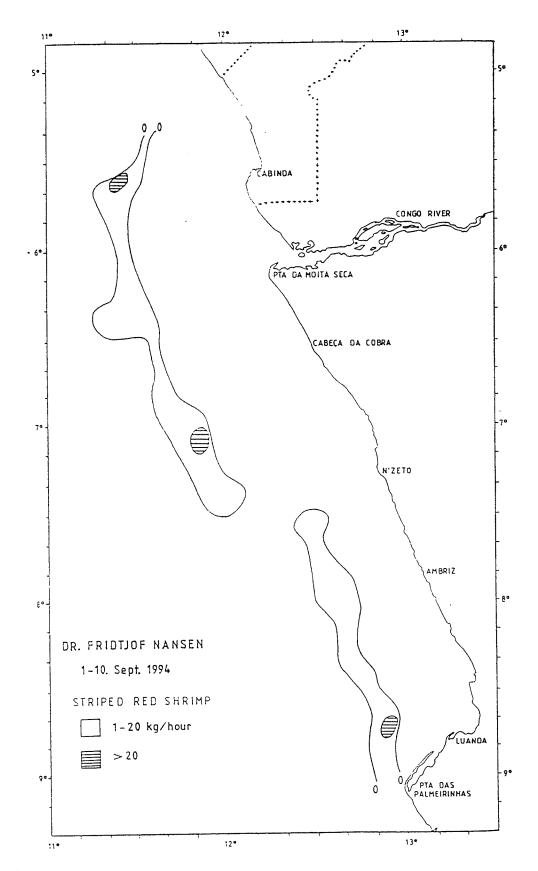


Figure 16. Cabinda - Luanda. Distribution of Aristeus varidens (kg per hour trawling).

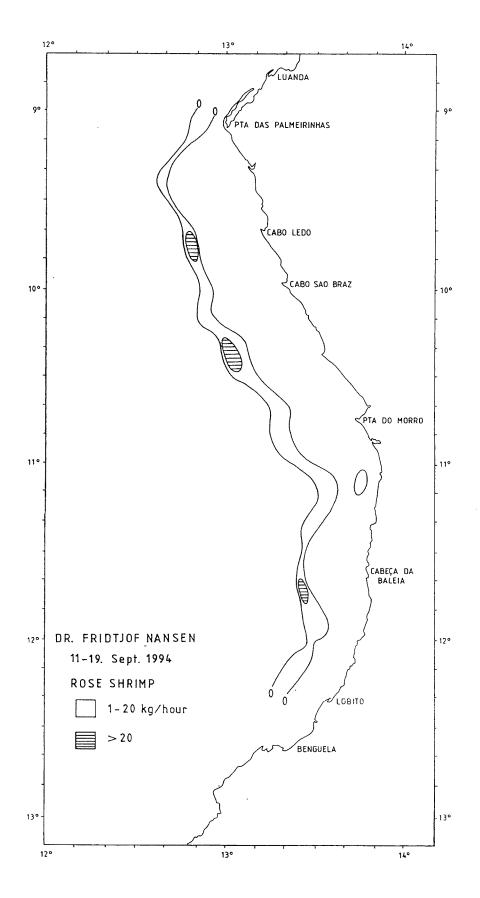


Figure 17. Luanda - Benguela. Distribution of Parapenaeus longirostris (kg per hour trawling).

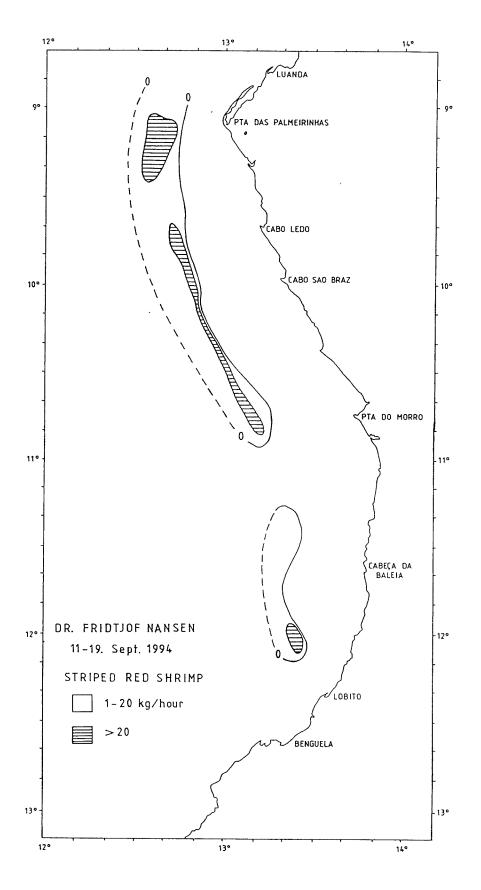


Figure 18. Luanda - Benguela. Distribution of Aristeus varidens (kg per hour trawling).

4.2 Benguela hake

The mean catch rates of Benguela hake (*Merluccius polli*) for the two regions and by depth, are shown in Table 15. Catch rates from some previous investigations are also given. Fig. 19 shows the distribution of hake in the Cabinda - Luanda region. It was mainly found on the slope from about 250 to 600 m depth, with the highest concentrations (> 100 kg/h) off N'Zeto. Like in 1992 the hake has a more shallow distribution than found in earlier investigations, with maximum mean catch rate in the 300-400 m zone. Compared with the results of 1992 (and earlier years) there has been a dramatic reduction in catch rates for all depth zones. The absolute decrease in mean catch rates were largest from 200-500 m, and this is the most important depth range for commercial shrimp as a whole. In the 400-500 m zone the mean catch rate decined by about 80%.

Area/	Year/period of investigation									
depth	1985/86	1989	1991/I	1992	1994					
Cabinda-Luanda 100-200 m 200-300 m 300-400 m 400-500 m 500-600 m 600-800 m	49 103 248 524 56	47 39 141 233 56	1 11 372 525 -	13 104 264 224 21 12	+ 28 134 43 12 1					
Luanda-Benguela 100-200 m 200-300 m 300-400 m 400-500 m 500-600 m 600-800 m	3 177 734 493 66	51 138 109 112 80	37 374 377 -	96 225 161 29	49 122 55 64 52 5					

Table 15. HAKE. Mean catch rates (kg/hour)by regions	, depth range and year/period of
investigation.	

Hake had a even more shallow distribution in the Luanda - Benguela region, with highest mean catch rate in the 200-300 m zone. The catch rates in most deeper zones (shrimp fishing grounds) have continued to decrease since 1992, and are very low compared to those obtained in the first investigations. The distribution (Fig. 20) was somewhat more patchy than in the northern region.

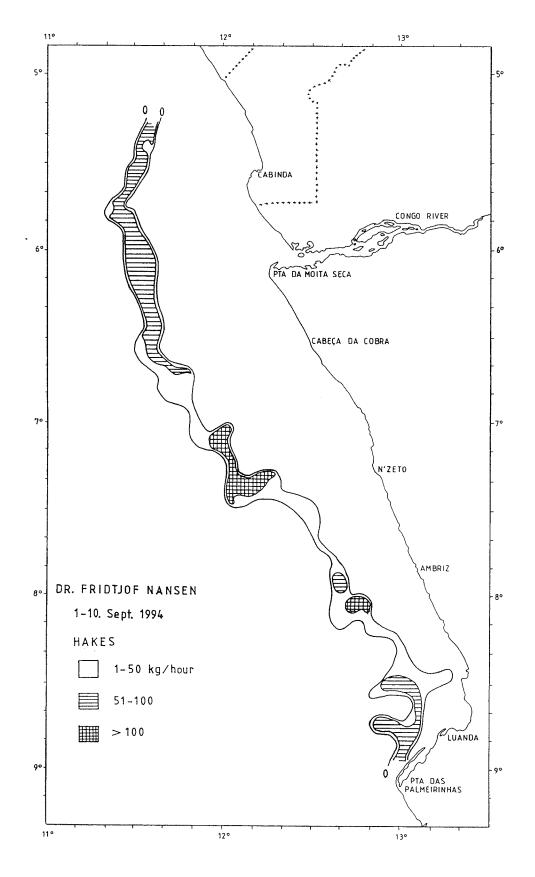


Figure 19. Cabinda - Luanda. Distribution of Merluccius polli (kg per hour trawling).

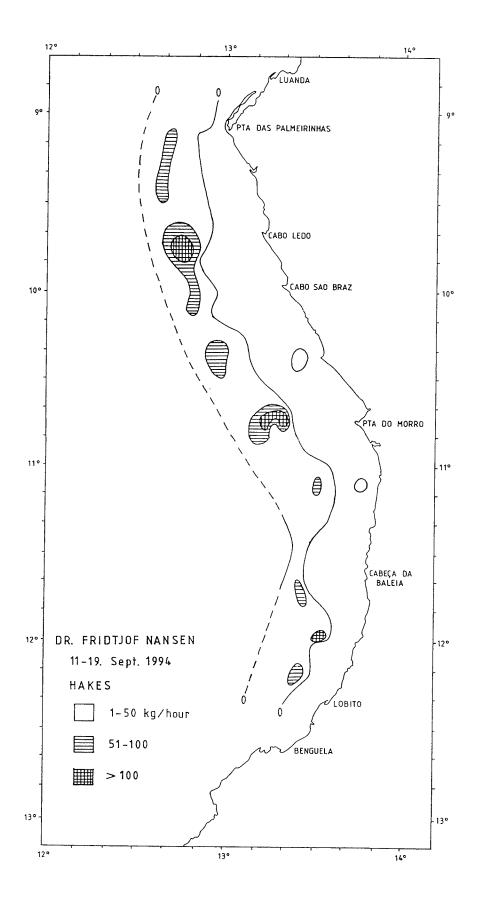


Figure 20. Luanda - Benguela. Distribution of Merluccius polli (kg per hour trawling).

Biomass estimates of hake are presented in Table 16. The densities applied in the calculations are shown in Annex I. In the Cabinda - Luanda region there was a 66% reduction in biomass from 1992 to 1994. In the Luanda - Benguela region the reduction was somewhat less (17%). The total biomass estimate for the whole area was only half of that found in 1992 and the biomass estimated is the lowest in the time series.

Region	Year/period of investigation											
	1985/86	1985/86 1989 1991/I 1992 19										
Cabinda-Luanda	22 000	13 000	18 000	14 000	4 700							
Luanda-Benguela	20 000	10 000	11 000	8 100	6 670							
Total	42 000	23 000	29 000	22 100	11 370							

Table 16. HAKE. Biomass estimates (tonnes) by area and year/period of investigation.

4.3 Co-Occurrence of shrimp and hake and predation studies

Table 17 shows the co-occurence of the commercial important deep water shrimps and hake in the Cabinda - Luanda region. 64% of the rose shrimp occurrence was together with hake, and 50% of the hake occurrence was together with rose shrimp. The density of rose shrimp was on average 79% higher when occurring with hake than when not, and the density of hake was 58% higher when occurring with rose shrimp than when not. One explanation to this is that hake concentrates in areas with high density of rose shrimp, probably to feed on the shrimp.

74% of the striped shrimp occurrence was together with hake, and 47% of the hake occurrence was together with rose shrimp. The density of rose shrimp was on average 72% higher when not occurring with hake than when it was, and the density of hake was 138% higher when not occuring with rose shrimp than when it was. So even if hake was found over the major part of the striped shrimp area, the densities of hake in this area was low and it was not any concentrations towards the densest striped shrimp areas. This could mean that hake prefers the same depth range as rose shrimp, or that hake prefers rose shrimp to striped shrimp as food, or that the catch/by-catch of hake has been higher in the striped shrimp areas or a combination of these factors.

There were only three stations where the three species occurred together, and the densities of all species was lower than the mean density of each species. Rose and striped shrimp were also only found together on these three stations. Hake occured alone on just two stations, but on the other hand the density of hake here was on average 154% higher than the mean density of hake. One of these incidents was juvenile hake on the shelf.

Present/	No.of		Catch		Catch rate			
not present stat.		Rose	Strp.	Hake	Rose	Strp.	Hake	
Rose (R) Rose not hake Rose and hake Hake not rose	25 9 16 16	336 68 268 -	- - -	- - 1281 814	13.4 7.6 16.6 -	- - -	- - 80.1 50.8	
Striped (S) Strip. not hake Strip. and hake Hake not strip.	23 6 17 15	- - -	149 56 93 -	- 675 1420	- - -	6.5 9.3 5.4 -	- 39.7 94.6	
Hake (H) H not R not S H and R and S	32 2 3		- - 3	2095 332 194	- - 11.3	- - 1.0	65.4 166.0 64.6	
Rose not strip. Strip. not rose Rose and strip.	22 20 3	302 - 34	- 146 3	- -	13.7 - 11.3	- 7.3 1.0	- -	

Table 17. Co-occurrence of rose shrimp, striped red shrimp and hake in the Cabinda-Luanda region.

The results of co-occurrence studies for the Luanda - Benguela region were mainly the same as for the Cabinda - Luanda region (Table 18). 85% of the rose shrimp occurrence was together with hake, and the density of rose shrimp was on average 42% higher when occuring with hake than when not. 49% of the hake occurrence was together with rose shrimp, but the density of hake was on average 140% higher when occurring with rose shrimp than when not.

90% of the striped shrimp occurrence was together with hake, and 49% of the hake occurrence was together with striped shrimp. And like in the northern region the density of hake was higher (69%) when not occurring with striped shrimp than when it was. The only difference was that the density of striped shrimp was much higher when occurring with hake than when not.

Present/	No.of		Catch		Catch rate				
not present	stat.	Rose	Strp.	Hake	Rose	Strp.	Hake		
Rose (R) Rose not hake Rose and hake Hake not rose	21 3 18 19	474 49 415 -	- - -	- 2063 904	22.6 16.3 23.1	- - -	- 114.6 47.6		
Striped (S) Strip. not hake Strip. and hake Hake not strip.	20 2 18 19	-	303 7 296 -	- 1064 1903		15.2 3.5 16.4 -	- 59.1 100.2		
Hake (H) H not R not S H and R and S	37 3 2	176		2967 16 176	- - 5.5	2.5	80.2 5.3 88.0		
Rose not strip. Strip. not rose Rose and strip.	19 18 2	463 - 11	- 298 5	- - -	24.4 - 5.5	- 16.5 2.5			

Table 18. Co-occurrence of rose shrimp, striped red shrimp and hake in the Luanda-Benguela region.

One of the objectives of the survey was to collect stomach samples of hake for later laboratory analysis of the contents. This would be a start of multispecies interaction studies, and hake was chosen as one of the possible shrimp predators. Results of these studies could both tell more about which shrimps hake prefer and thereby explain why hake concentrates in some areas and are vulnerable to by-catch in the shrimp fishery. At a later stage the hakes consumption of shrimps could perhaps be quantified and the impact on the shrimp stocks could be evaluated.

In the Cabinda-Luanda region 164 hake stomachs were collected and in Luanda - Benguela 136, most of them from fish of 30-50 cm length. 60% of the stomachs were jugded to be emty based on an external inspection. Also in other areas, e.g. in Namibian waters, a high percentage of empty stomachs seems to be a problem when collecting stomachs of hake. Sometimes this is caused by regurgitation or inverted stomachs, and if these stomachs are classified as empty the results will be biased. A special study on how to deal with/solve this problem should be initiated.

Annex I Swept-area estimates

SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

A. CABINDA-LUANDA. Demersal species shelf.

SPECIES NAME SAMPLI	DISTRIB. BY CAT	CH CLASSES	% inci-	Mean	Mean densi	ties by both	tom depth si	rata t/nmª
	Lower limits, K		dence	dens. t/nm²	- 50m	50-100m	100-200m	200-200n
Brachydeuterus auritus Synagrops microlepis	1 1 3 2 4	2	13 28	1.61 0.90	5.49	0.20 1.43	1.10	
Dentex gibbosus	1	1	6	0.71	2.51		0.01	
Dentex angolensis Chlorophthalmus atlanticus	972 21	1	56 13	0.65 0.53		0.43	1.35 1.41	
				0.55			1.41	
Pagellus bellottii	10 6 1 6 1	1	53	0.52	1.06	0.64	0.02	
Umbrina canariensis Dentex canariensis	11 1 2	1	25 44	0.49 0.41	1,13	0.07 0.24	1.25	
Spicara alta	7 1 2		31	0.35	1.10	0.01	0.00	
Pterothrissus belloci	641		34	0.33		0.39	0.52	
Dentex congoensis	5 2 1		25	0.32		0.39	0.49	
Dentex barnardi	5 2		22	0.31	0.55	0.43	0.01	
Dentex macrophthalmus Brotula barbata	721 94		31	0.31		0.02	0.81	
Pentheroscion mbizi	1 1 1		41 9	0.31 0.29	0.16	0.27 0.71	0.57	
Pagaa baana	17 1		56	0.28	0.81	0.10		
Boops boops Galeoides decadactylus	1 1		6	0.28	0.81 0.78	0.10	10.05	
Miracorvina angolensis	3 1 1		16	0.21		0.20	0.37	
Epinephelus aeneus	3 4		22	0.20	0.31	0.28	0.05	
Raja miraletus	13 2		47	0.20	0.16	0.32	0.14	
Sepia sp.	12 2		44	0.19	0.35	0.27	A 14	
Epinephelus haifensis Branchiostegus semifasciatus	1 10 1		3 34	0.18 0.16		0.19	0.48 0.25	
Sepia officinalis hierredda	5 1		19	0.10	0.37	0.06	0.23	
Alloteuthis africana	2 1		9	0.14		0.40		
Sparus caeruleostictus	4 2		19	0.12	0.28	0.11		
Zenopsis conchifer	10		31	0.11		0.04	0.26	
Zeus faber	16 6 1		44	0.09	0.12	0.09	0.07	
Sparus pagrus africanus Pseudotolithus typus	61 11		22 6	0.09 0.09	0.17 0.30	0.09 0.03	0.03	
Citharus linguatula	18		56	0.09	0.03	0.06	0.17	
Chelidonichthys gabonensis	5 1		19	0.07	0.00	0.03	0.15	
Sparus auriga	5		16	0.07	0.14	0.07	0.01	
Uranoscopus polli Parapenaeus longirostris, fem.	11 5 1		34 19	0.06	0.01	0.07 0.05	0.10 0.12	
						0.05		
Epinephelus goreensis	21 5		9 16	0.06	0.04	0.00	0.13	
Argyrosomus hololepidotus Pomadasys incisus	3 1		13	0.06 0.06	0.09	0.09 0.12		
Anthias anthias	1 1		6	0.06	0.00	0.12	0.16	
Stromateus fiatola	4		13	0.05	0.09	0.07		
Illex coindetii	12		38	0.05		0.02	0.11	
Scorpaena angolensis	7		22	0.05		0.05	0.08	
Rhinobatos sp. Parapenaeus longirostris, male	1 5 1		3 19	0.05	0.19	0.02	0.10	
Penaeus notialis, female	1		10	0.01		0.02	0.10	
Penaeus notialis, male	1		3					
Parapenaeus longirostris	1		3			.		
Other fish				0.56	0.88	0.68	0.39	
Sum all species				11.86	16.08	8.75	11.74	
Sum Snappers								
Sum Groupers Sum Grunts				0.47	0.45	0.30	0.66	
Sum Grunts Sum Croakers				1.71 1.19	5.63 0.67	0.37	0.01 1.63	
Sum Seabreams				3.79	6.65	2.52	2.81	
Sum Sharks				0.04		0.14		
Sum Rays				0.34	0.49	0.50	0.15	
Sum Squids Sum				0.58	0.74	0.79	0.26	
Sum commercial shrimps				0.11		0.08	0.22	

32 9 11 12

B. LUANDA-BENGUELA. Demersal species shelf.

SPECIES NAME SAMPLE		STRIB. Ver lin				S	% inci- dence	Mean dens.	Mean densi	ties by bot	tom depth si	trata t/nm*
		10			300 10	. 000	Gence	t/nm*	- 50m	50-100m	100-200m	200 - 200m
Dentex macrophthalmus Synagrops microlepis Pentheroscion mbizi Chlorophthalmus atlanticus Umbrina canariensis	3 3 1 3 12	5 3 2	6 3	2 3 2 1	3 1		51 32 5 14 41	5.13 2.04 1.52 1.14 0.85	0.34	2.39 3.71 0.15	11.51 1.95 4.02 3.00 2.11	
Pagellus bellottii Merluccius polli Dentex angolensis Brachydeuterus auritus Sepia officinalis hierredda	15 5 10 8 7	3 2 5 2	1 2 1	1 1 1 1			54 19 46 30 24	0.83 0.63 0.61 0.55 0.50	0.10 0.02 0.28 1.60	2.18 0.16 1.43 0.06,	0.24 1.65 1.48	
Dentex canariensis Anthias anthias Zenopsis conchifer Brotula barbata Atractoscion aequidens	15 2 8 7 4	1 1 3 1	2 2 2 1 1				49 11 30 30 16	0.48 0.35 0.32 0.25 0.22	0.52	0.99 0.02 0.02 0.05 0.59	0.01 0.92 0.82 0.63 0.06	
Pterothrissus belloci Zeus faber Illex coindetii Branchiostegus semifasciatus Sepia sp.	11 18 11 2 6	1 1 1 3 3	1				32 51 35 14 24	0.20 0.19 0.19 0.19 0.13	0.08	0.07 0.12 0.39 0.22	0.45 0.33 0.49 0.16	
Spicara alta Chelidonichthys capensis Boops boops Scorpaena angolensis Torpedo torpedo	6 8 3 9 6	1 2 2 1	1				19 24 14 30 19	0.13 0.12 0.10 0.10 0.10	0.01 0.01	0.02 0.11 0.13 0.01 0.06	0.33 0.21 0.16 0.25 0.20	
Todaropsis eblanae Raja miraletus POMACENTRIDAE Alloteuthis africana Uranoscopus polli	7 12 5 10	1 1 1					22 32 3 16 24	0.09 0.09 0.08 0.07 0.06	0.07 0.27 0.06	0.12 0.14 0.05	0.23 0.10 0.12	
Chelidonichthys gabonensis Sparus caeruleostictus Squatina oculata Epinephelus goreensis Epinephelus aeneus	6 2 5 6 3	1					16 8 14 16 11	0.05 0.05 0.05 0.05 0.05	0.02	0.14 0.02 0.02 0.01	0.12 0.01 0.11 0.11 0.10	
MACROURIDAE Lutjanus goreensis Citharus linguatula Parapenaeopsis atlantica Parapenaeus longirostris, fem.	2 19 3	1 1 1					8 3 51 3 8	0.05 0.05 0.05 0.03 0.03	0.17 0.09	0.05	0.12 0.08 0.03	
Parapenaeus longirostris Parapenaeus longirostris, male Penaeus notialis Other fish	3 3 1						8 8 3	0.02 0.01 0.63	0.43	0.51	0.05 0.01 0.87	
Sum all species							1	18.37	4.27	13.96	33.04	
Sum Snappers Sum Groupers Sum Grouts Sum Croakers Sum Seabreams Sum Sharks Sum Rays Sum Rays Sum Squids Sum								0.06 0.11 0.57 2.65 7.30 0.07 0.26 1.02	0.20 0.02 0.31 0.67 0.67 0.15 1.87	0.05 1.47 0.75 6.07 0.02 0.29 0.46	0.22 6.31 13.57 0.16 0.32 0.77	
Sum commercial shrimps								0.08	0.09	0.02	0.09	L

Number of stations included in analysis, total and by depth strata

37 11 12 14

C. CABINDA-LUANDA. Demersal species slope.

SPECIES NAME SAMPL	E DISTRIB. BY CATCH CLASSE Lower limits, Kg/nm	S % inci- dence	Mean dens.	Mean densities by bottom depth strata t/nm ¹			
	>0 10 30 100 300 10	00	t/nm²	200-300m	300-400m	400-500m	500-500
Chlorophthalmus atlanticus	12 3 3 3 1	76	4.17	5.56	6.53		
Synagrops microlepis	7243	55	2.71	6.74	1.13		
Merluccius polli	6 10 6 2	79	2.24	0.94	4.22	1.47	
Nematocarcinus africanus	5 1 3 2	38 34	1.81	0.13	2.05	3.55 2.45	
Centrophorus granulosus	7 2 1		0.83	0.13	0.09	2.40	
MACROURIDAE	14 8	76	0.67	0.14	1.01	0.89	
Dentex angolensis	3 6 1	34	0.65	1.69	0.18	0.01	
GOBIIDAE	2 2	14	0.42	1.23 0.76	0.13		
Pterothrissus belloci	10 2 1 3 1	45	0.31	0.76	0.15		
Miracorvina angolensis	3 1		0.22	0.03			
P arapenaeus longirostris, fem.	14 1	52	0.20	0.31	0.28		
Zenopsis conchifer	8 1	31 17	0.13	0.36	0.01	0.41	
Hoplostethus mediterraneus	32 11	7	0.13	0.34		0.41	
Squatina aculeata	1 1 15	52	0.10	0.20	0.10		
Parapenaeus longirostris, male							
LOPHIIDAE	14	48	0.10	0.02	0.13	0.16	
Conger conger	1 1	7	0.10	0.28			
Gephyroberyx darwini	1 13	45	0.09	0.20	0.18	0.01	
Illex coindetii S H A R K S	3 1	14	0.07	0.01	0.19		
			0.07	0.21	+		
Brotula barbata	2 1 10	10 34	0.06	0.21	0.06	0.01	
Todaropsis eblanae Scorpaena normani	3 1	14	0.06	0.14	0.03		
GONOSTOMATIDAE	8	28	0.06		0.01	0.17	
Hoplostethus atlanticus	1	3	0.05		0.14		
Centroscymnus crepidater	1	3	0.05	1		0.16	
Aristeus varidens, male	8	28	0.04			0.13	
Aristeus varidens, female	8	28	0.03		0.01	0.10	
Solenocera africana	3	10	0.01	0.01	0.01		
Glyphus marsupialis	3	10				0.01	
Parapenaeus longirostris	3	10		0.01	0.01		
Plesionika martia	1	3			0.01		
Parapandalus narval	1	3			0.01		
Aristeus varidens Other fish	4	14	0.68	0.71	0.60	0.83	
Sum all species			16.27	20.87	17.12	10.36	
Sum Snappers	17 API 4 (1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1						
Sum Snappers Sum Groupers						0.01	
Sum Grunts					1		
Sum Croakers			0.25			0.01	
Sum Seabreams			0.72			0.23	1
Sum Sharks			1.12			2.67	
Sum Rays			0.04		0.26	0.04	
Sum Squids			0.20	0.19	0.20	0.14	1
Sum Sum commercial shrimps			2.19	0.53	2.48	3.79	
							.L

C. CABINDA-LUANDA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. Lower li			% inci- dence	Mean dens.	Mean densi	ties by bot	tom depth s	trata t/nm²
	>0 10	30	100 300 1000		t/nm²	500-600m	600-800m	800-800m	800-800m
Nematocarcinus africanus	3	3	1	58	3.05	5.96	0.15		
MACROURIDAE	4 4	4		100	2.25	1.21	3.30		
Hoplostethus cadenati	5 1	1		58	0.83	0.62	1.05		
GONOSTOMATIDAE	8 3			92	0.65	0.86	0.45]
Hoplostethus mediterraneus	s 2	1		25	0.49	0.04	0.93		
Scyllarides herklotsii	10			83	0.33	0.23	0.42		
Merluccius polli	4 1			42	0.23	0.43	0.04		
Aristeus varidens, female	8			67	0.13	0.17	0.08		
Centrophorus sp.	3 1			33	0.11	0.18	0.03		
Geryon maritae	8			67	0.11	0.06	0.16		
Aristeus varidens, male	7			58	0.10	0.13	0.06		
Paromola cuvieri	1			8	0.07		0.15		
Hoplostethus sp.	2			17	0.06	0.10	0.02		
OPHICHTHIDAE	2			17	0.05	0.02	0.08		
ALEPOCEPHALIDAE	1			8	0.05		0.10		
Glyphus marsupialis	4			33	0.02		0.03		
Aristeus varidens	3			25	0.01	0.01	0.01		
Solenocera africana	1			8					
Plesiopenaeus edwardsianus	s 1			8]	
Other fish		<u></u>			0.26	0.22	0.31		
Sum all species					8.80	10.24	7.37		
<u></u>									
Sum Snappers									
Sum Groupers									1
Sum Grunts									
Sum Croakers							Į	l	l
Sum Seabreams								1	
Sum Sharks					0.21	0.34	0.05		
Sum Rays					0.04		0.10	1	
Sum Squids					0.02	0.01	0.03		
Sum								1	
Sum commercial shrimps					3.31	6.27	0.33		

Number of stations included in analysis, total and by depth strata

12 6 6

D. LUANDA-BENGUELA. Demersal species slope.

SPECIES NAME SAMP	MPLE DISTRIB. BY CATCH CLASSES Lower limits, Kg/nm						% inci- Mean dence dens.	Mean dens.	· · · · · · · · · · · · · · · · · · ·				
		10	30			1000		t/nm*	200-300m	300-400m	400-500m	500-500	
Chlorophthalmus atlanticus	9	2	1	5			76	6.34	16.45	2.94	0.04		
Pentheroscion mbizi	2		2		1		20	2.98	9.29	0.01			
Merluccius polli	6	11	4	1			88	2.63	4.07	1.78	2.13		
Hoplostethus cadenati	5	3	3				44	1.09		0.94	2.35		
Dentex macrophthalmus	1	1	1	1			16	0.87	2.73				
Synagrops microlepis	3	2		1			24	0.66	2.00	0.07		,	
Nematocarcinus africanus	6	4	1				44	0.57	0.01	0.26	1.48		
Laemonema laureysi	5	6					40	0.53	0.03	0.68	0.88		
Gephyroberyx darwini	7		1				32	0.51	0.17	1.24	0.03		
MACROURIDAE	17	3					76	0.47	0.44	0.52	0.45		
Pterothrissus belloci	9	5					56	0.46	0.74	0.61			
Erythrocles monodi	1		1				8	0.36	1.11				
Parapenaeus longirostris, fem.	8	4					48	0.28	0.54	0.30			
Centrophorus granulosus	4	2					24	0.28	0.28	0.27	0.31		
GOBIIDAE		1	1				8	0.24	0.58		0.18		
SHARKS	8	2					40	0.22		0.05	0.63		
Parapenaeus longirostris, male	9	2					44	0.19	0.42	0.15			
Aristeus varidens, female	8	1					36	0.17		0.01	0.50		
GONOSTOMATIDAE	7	2					36	0.17		0.02	0.49		
Zenopsis conchifer	12	1					48	0.16	0.44	0.05	0.01		
Deepwater fish mixture		1	_				4.	0.10		0.27			
Aristeus varidens, male	9						36	0.08		0.01	0.25		
LOPHIIDAE	12						48	0.08		0.09	0.15		
Illex coindetii	13						52	0.07	0.04	0.06	0.09		
Geryon maritae	12						48	0.07	0.02	0.09	0.10		
Todaropsis eblanae	5						20	0.05	0.15	0.01			
Parapenaeus longirostris	2						8	0.02	0.05				
Plesiopenaeus edwardsianus	2						8	0.01		0.03			
Solenocera africana	4						16			0.01			
Glyphus marsupialis	4						16				0.01		
Aristeus varidens Other fish	1	<u></u> ,,					4	0.68	0.91	0.77	0.35		
· · · · · · · · · · · · · · · · · · ·							L					-	
Sum all species								20.34	40.47	11.24	10.43		
Sum Snappers													
Sum Groupers							le la						
Sum Grunts													
Sum Croakers								2.99	9.32	0.01			
Sum Seabreams								0.93	2.91				
Sum Sharks								0.53	0.28	0.37	0.96		
Sum Rays								0.01	0.03	0.01			
Sum Squids								0.13	0.21	0.07	0.09		
Sum Sum commercial shrimps								1.32	1.02	0.77	2.24		
								1.52	1.02	0.11	2.24		
Number of stations included in					L		• • .	25	8	9	8		

D. LUANDA-BENGUELA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. BY C Lower limits,		% inci- dence	Mean dens.	Mean densi	ties by bot	tom depth s	trata t/nm²
	>0 10 30	100 300 1000		t/nm*	500-600m	600-800m	800-800m	800 - 800m
Nematocarcinus africanus	4 1	1	75	2.64	4.11	0.21		
MACROURIDAE	4 2 2		100	1.77	0.70	3.55		
Merluccius polli	25		88	1.21	1.83	0.19		
GONOSTOMATIDAE	6 1 1		100	1.13	0.85	1.60		
Hoplostethus cadenati	6 2		100	1.03	0.83	1.36		
Aristeus varidens, female	6 1	······································	88	0.31	0.35	0.25		
Scyllarides herklotsii	7		88	0.31	0.18	0.52		
Geryon maritae	6		75	0,16	0.15	0.17		
Aristeus varidens, male	7		88	0.14	0.18	0.08		-
OPHIDIIDAE	2		25	0.14	0.11	0.19		
CRABS	1		13	0.12		0.32		
Etmopterus spinax	5		63	0.11	0,16	0.01		
Centrophorus granulosus	1		13	0.11	0.17			
OPHICHTHIDAE	2		25	0.10	0.15	0.01		
Deepwater fish mixture	1		13	0.09	0.14			
CONGRIDAE	4		50	0.08	0.04	0,14		
LOPHIIDAE	5		63	0.06	0.08	0.03		
NETTASTOMATIDAE	2		13	0.05		0.13		
Plesiopenaeus edwardsianus	s 4		50	0.01	0.01	0.01		
Aristeus varidens	1		13	0.01		0.02		
Glyphus marsupialis	1		13			0.01		
Other fish				0.15	0.14	0.21		
Sum all species				9.73	10.18	9.01		
								,
Sum Snappers								
Sum Groupers Sum Grunts				0.01		0.03		
Sum Grunts Sum Croakers								
Sum Croakers Sum Seabreams								
Sum Sharks				0 00	0.00			
Sum Rays				0.22	0.33	0.01		
Sum Squids					0.10	0.07		
sum Sum				0.08	0.10	0.07		
Sum commercial shrimps				3.11	4.65	0.58		

Number of stations included in analysis, total and by depth strata

8 5 3

A. CABINDA-LUANDA. Demersal species shelf.

SPECIES NAME SAM			BY CATCH CLASSES its, Kg/nm	% inci- dence	Mean dens.	Mean densi	ies by both	tom depth st	rata t/nm²
		10	30 100 300 1000	dence	t/nm²	- 50m	50-100m	100-200m	200-200m
Brachydeuterus auritus Synagrops microlepis Dentex gibbosus Dentex angolensis Chlorophthalmus atlanticus	3 1 9 2	1 2 7 1	1 2 4 1 2 1	13 28 6 56 13	1.61 0.90 0.71 0.65 0.53	5.49 2.51	0.20 1.43 0.43	1.10 0.01 1.35 1.41	
Pagellus bellottii Umbrina canariensis Dentex canariensis Spicara alta Pterothrissus belloci	10 6 11 7 6	6 1 1 1 4	1 1 2 2 1	53 25 44 31 34	0.52 0.49 0.41 0.35 0.33	1.06 1.13	0.64 0.07 0.24 0.01 0.39	0.02 1.25 0.03 0.92 0.52	
Dentex congoensis Dentex barnardi Dentex macrophthalmus Brotula barbata Pentheroscion mbizi	5 5 7 9 1	2 2 4 1	1 2 1 1	25 22 31 41 9	0.32 0.31 0.31 0.31 0.29	0.55 0.16	0.39 0.43 0.02 0.27 0.71	0.49 0.01 0.81 0.57	
Boops boops Galeoides decadactylus Miracorvina angolensis Epinephelus aeneus Raja miraletus	17 1 3 3 13	1 4 2	1 1 1	56 6 16 22 47	0.28 0.22 0.21 0.20 0.20	0.81 0.78 0.31 0.16	0.10 0.20 0.28 0.32	0.05 0.37 0.05 0.14	
Sepia sp. Epinephelus haifensis Branchiostegus semifasciatus Sepia officinalis hierredda Alloteuthis africana	12 10 5 2	2 1 1	1	44 3 34 19 9	0.19 0.18 0.16 0.14 0.14	0.35	0.27 0.19 0.06 0.40	0.48 0.25 0.03	
Sparus caeruleostictus Zenopsis conchifer Zeus faber Sparus pagrus africanus Pseudotolithus typus	4 10 16 6 1	2 1 1		19 31 44 22 6	0.12 0.11 0.09 0.09 0.09	0.28 0.12 0.17 0.30	0.11 0.04 0.09 0.09 0.03	0.26 0.07 0.03	
Citharus linguatula Chelidonichthys gabonensis Sparus auriga Uranoscopus polli Parapenaeus longirostris, fem	18 5 5 11	1		56 19 16 34 19	0.09 0.07 0.07 0.06 0.06	0.03 0.14 0.01	0.06 0.03 0.07 0.07 0.05	0.17 0.15 0.01 0.10 0.12	
Epinephelus goreensis Argyrosomus hololepidotus Pomadasys incisus Anthias anthias Stromateus fiatola	2 5 3 1 4	1 1 1		9 16 13 6 13	0.06 0.06 0.06 0.06 0.05	0.04 0.09 0.06 0.09	0.09 0.12 0.07	0.13 0.16	
Illex coindetii Scorpaena angolensis Rhinobatos sp. Parapenaeus longirostris, mal Penaeus notialis, female	12 7 e 5 1	1 1		38 22 3 19	0.05 0.05 0.05 0.04 0.01	0.19	0.02 0.05 0.02 0.01	0.11 0.08 0.10	
Penaeus notialis, male Parapenaeus longirostris Other fish	1			3 3	0.56	0.88	0.68	0.39	
Sum all species					11.86	16.08	8.75	11.74	
Sum Snappers Sum Groupers Sum Grunts Sum Croakers Sum Seabreams Sum Sharks Sum Rays Sum Squids					0.47 1.71 1.19 3.79 0.04 0.34 0.58	0.45 5.63 0.67 6.65 0.49 0.74	0.30 0.37 1.14 2.52 0.14 0.50 0.79	0.66 0.01 1.63 2.81 0.15 0.26	
Sum Sum commercial shrimps					0.11		0.08	0.22	

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12

B. LUANDA-BENGUELA. Demersal species shelf.

	2 3 2 5 2 1 1 1 3 1 1 1 1 1 3 3 3 1 2	30 6 3 1 2 1 2 2 2 1 1 1 1	100 2 3 2 1 1 1 1 1	300	1000	dence 51 32 5 14 41 54 19 46 30 24 49 11 30 30 30 16 32	dens. t/nm ² 5.13 2.04 1.52 1.14 0.85 0.83 0.63 0.61 0.55 0.50 0.48 0.35 0.32 0.25 0.22	- 50m 0.34 0.10 0.02 0.28 1.60 0.52	50-100m 2.39 3.71 0.15 2.18 0.16 1.43 0.06 0.99 0.02 0.02 0.02 0.02 0.59	100-200m 11.51 1.95 4.02 3.00 2.11 0.24 1.65 1.48 0.01 0.92 0.82 0.63 0.06	200-200m
Synagrops microlepis3Pentheroscion mbizi1Chlorophthalmus atlanticus3Umbrina canariensis12Pagellus bellottii15Merluccius polli5Dentex angolensis10Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4	3 2 3 2 5 2 1 1 1 3 1 1 1 1 1 3 3 3 1 2 5 2	3 1 2 2 2 1 1 1	3 2 1 1 1 1 1	; 		32 5 14 41 54 19 46 30 24 49 11 30 30 16 32	2.04 1.52 1.14 0.85 0.83 0.63 0.61 0.55 0.50 0.48 0.35 0.32 0.25 0.22	0.10 0.02 0.28 1.60	3.71 0.15 2.18 0.16 1.43 0.06 0.99 0.02 0.02 0.02 0.05	1.95 4.02 3.00 2.11 0.24 1.65 1.48 0.01 0.92 0.82 0.63	
Pentheroscion mbizi1Chlorophthalmus atlanticus3Umbrina canariensis12Pagellus bellottii15Merluccius polli5Dentex angolensis10Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4Terothrissus belloci11Zeus faber18Illex coindetii11Branchiostegus semifasciatus2Sepia ag.6Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	2 3 2 5 2 1 1 1 3 1 1 1 1 1 3 3 3 1 2	1 2 1 2 2 2 1 1 1	2 1 1 1 1 1	1 :		5 14 41 54 19 46 30 24 49 11 30 30 16 32	1.52 1.14 0.85 0.63 0.61 0.55 0.50 0.48 0.35 0.32 0.25 0.22	0.10 0.02 0.28 1.60	0.15 2.18 0.16 1.43 0.06 0.99 0.02 0.02 0.02 0.05	4.02 3.00 2.11 0.24 1.65 1.48 0.01 0.92 0.82 0.63	
Chlorophthalmus atlanticus3Umbrina canariensis12Pagellus bellottii15Merluccius polli5Dentex angolensis10Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4	2 3 2 5 2 1 1 1 3 1 1 1 1 3 3 1 2	2 1 2 2 2 1 1 1	1 1 1 1			14 41 54 19 46 30 24 49 11 30 30 16 32	1.14 0.85 0.83 0.63 0.61 0.55 0.50 0.48 0.35 0.32 0.25 0.22	0.02 0.28 1.60	2.18 0.16 1.43 0.06 0.99 0.02 0.02 0.02 0.05	2.11 0.24 1.65 1.48 0.01 0.92 0.82 0.63	
Pagellus bellottii15Merluccius polli5Dentex angolensis10Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4	3 2 5 2 1 1 3 1 1 1 3 3 3 1 1 2	2 1 2 2 2 1 1 1	1 1 1 1			54 19 46 30 24 49 11 30 30 16 32	0.83 0.63 0.61 0.55 0.50 0.48 0.35 0.35 0.32 0.25 0.22	0.02 0.28 1.60	2.18 0.16 1.43 0.06 0.99 0.02 0.02 0.02 0.05	0.24 1.65 1.48 0.01 0.92 0.82 0.63	
Merluccius polli5Dentex angolensis10Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4Pterothrissus belloci11Zeus faber18Illex coindetii11Branchiostegus semifasciatus2Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	2 5 2 1 1 3 1 1 1 1 3 3 3 1 2	2 1 2 2 2 1 1 1	1			19 46 30 24 49 11 30 30 16 32	0.63 0.61 0.55 0.50 0.48 0.35 0.35 0.25 0.22	0.02 0.28 1.60	0.16 1.43 0.06 0.99 0.02 0.02 0.02 0.05	1.65 1.48 0.01 0.92 0.82 0.63	
Dentex angolensis10Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4Pterothrissus belloci11Zeus faber18Illex coindetii11Branchiostegus semifasciatus2Sepia sp.6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	5 2 1 1 3 1 1 1 1 1 3 3 3 1 2	1 2 2 2 1 1 1	1	l		46 30 24 49 11 30 30 16 32	0.61 0.55 0.50 0.48 0.35 0.35 0.22 0.22	0.28 1.60	1.43 0.06 0.99 0.02 0.02 0.02 0.05	1.48 0.01 0.92 0.82 0.63	
Brachydeuterus auritus8Sepia officinalis hierredda7Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4Pterothrissus belloci11Zeus faber18Illex coindetii11Branchiostegus semifasciatus2Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	2 1 1 3 1 1 1 1 3 3 3 1 1 2	1 2 2 2 1 1 1	1			30 24 49 11 30 30 16 32	0.55 0.50 0.48 0.35 0.32 0.25 0.22	1.60	1.43 0.06 0.99 0.02 0.02 0.02 0.05	0.01 0.92 0.82 0.63	
Dentex canariensis15Anthias anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4	1 1 3 1 1 1 3 3 3 1 2	2 2 2 1 1 1		I		49 11 30 30 16 32	0.48 0.35 0.32 0.25 0.22		0.99 0.02 0.02 0.05	0.92 0.82 0.63	
Anthias2Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4——Pterothrissus belloci11Zeus faber18Illex coindetii11Branchiostegus semifasciatus2Sepia sp.6——Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	1 3 1 1 1 3 3 3 1 2	2 2 1 1 1				11 30 30 16 32	0.35 0.32 0.25 0.22	0.52	0.02 0.02 0.05	0.92 0.82 0.63	
Zenopsis conchifer8Brotula barbata7Atractoscion aequidens4	1 3 1 1 1 3 3 3 1 2	2 1 1				30 30 16 32	0.32 0.25 0.22		0.02 0.05	0.82 0.63	
Brotula barbata7Atractoscion aequidens4	3 1 1 1 1 3 3 	1				30 16 32	0.25 0.22		0.05	0.63	
Pterothrissus belloci 11 Zeus faber 18 Illex coindetii 11 Branchiostegus semifasciatus 2 Sepia sp. 6 	1 1 3 3 1 2	1				32			0.59	0.06	
Zeus faber18Illex coindetii11Branchiostegus semifasciatus2Sepia sp.6	1 1 3 3 	1									
Illex coindetii11Branchiostegus semifasciatus2Sepia sp.6Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	1 3 3 1 2	1					0.20		0.07	0.45	
Branchiostegus semifasciatus2Sepia sp.6Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	3 3 					51 35	0.19	0.08	0.12	0.33 0.49	
Sepia sp.6Spicara alta6Chelidonichthys capensis8Boops boops3Scorpaena angolensis9	1					14	0.19		0.39	0.16	
Chelidonichthys capensis 8 Boops boops 3 Scorpaena angolensis 9	1 2	1				24	0.13	0.20	0.22		
Boops boops 3 Scorpaena angolensis 9	2					19	0.13		0.02	0.33	
Scorpaena angolensis 9						24 14	0.12	0.01	0.11 0.13	0.21	
	۷.					30	0.10	0.01	0.01	0.25	
	1					19	0.10		0.06	0.20	
Todaropsis eblanae 7						22	0.09			0.23	
Raja miraletus 12 POMACENTRIDAE	1					32 3	0.09	0.07	0.12	0.10	
Alloteuthis africana 5						16	0.07	0.06	0.14		
Uranoscopus polli 10						24	0.06		0.05	0.12	
Chelidonichthys gabonensis 6						16	0.05			0.12	
Sparus caeruleostictus 2 Squatina oculata 5						8 14	0.05		0.14	0.01	
Squatina oculata 5 Epinephelus goreensis 6						16	0.05		0.02	0.11	
Epinephelus aeneus 3	1					11	0.05	0.02	0.01	0.10	
MACROURIDAE 2						8	0.05	0.47		0.12	
Lutjanus goreensis Citharus linguatula 19	1					3 51	0.05	0.17	0.05	0.08	
Parapenaeopsis atlantica	1					3	0.03	0.09	0.00	0.00	
Parapenaeus longirostris, fem. 3						8	0.02		0.02	0.03	
Parapenaeus Longirostris 3						8 8	0.02			0.05	
Parapenaeus longirostris, male 3 Penaeus notialis 1						3	0.01			0.01	
Other fish							0.63	0.43	0.51	0.87	
Sum all species							18.37	4.27	13.96	33.04	
Sum Snappers							0.06	0.20			
Sum Groupers							0.11	0.02	0.05	0.22	
Sum Grunts Sum Croakers							2.65	0.03	0.75	6.31	
Sum Seabreams							7.30	0.67	6.07	13.57	
Sum Sharks							0.07	0.15	0.02	0.16	
Sum Rays Sum Squids							1.02	1.87	0.23	0.77	
Sum											
Sum commercial shrimps							0.08	0.09	0.02	0.09	1
Number of stations included in anal		. - •		a L	ما م د ۲۰	****	37	11	12	14	

C. CABINDA-LUANDA. Demersal species slope.

SPECIES NAME SAMPLI	E DISTRIB. BY C Lower limits,		% inci- dence	Mean dens.	Mean densities by bottom depth strata t/m				
		100 300 1000		t/nm²	200-300m	300-400m	400-500m	500-500r	
Chlorophthalmus atlanticus	12 3 3	3 1	76	4.17	5.56	6.53			
Synagrops microlepis	7 2 4	3	55	2.71	6.74	1.13			
Merluccius polli Nematocarcinus africanus	6 10 6 5 1 3	2 2	79	2.24	0.94	4.22 2.05	1.47 3.55		
Centrophorus granulosus	7 2	1	34	0.83	0.13	0.09	2.45		
MACROURIDAE	14 8		76	0.67	0.14	1.01	0.89		
Dentex angolensis	3 6 1		34	0.65	1.69	0.18	0.01		
GOBIIDAE Pterothrissus belloci	2 2 10 2 1		14	0.42	1.23	0.13			
Miracorvina angolensis	3 1		14	0.22	0.65	0.10			
Parapenaeus longirostris, fem.	14 1		52	0.20	0.31	0.28			
Zenopsis conchifer	8 1		31	0.13	0.36	0.01			
Hoplostethus mediterraneus Squatina aculeata	32 11		17	0.13	0.34		0.41		
Parapenaeus longirostris, male	15		52	0.10	0.20	0.10			
LOPHIIDAE	14		48	0.10	0.02	0.13	0.16		
Conger conger	1 1		7	0.10	0.28				
Gephyroberyx darwini Illex coindetii	1 13		3 45	0.09 0.09	0.26	0.18	0.01		
SHARKS	3 1		14	0.03	0.01	0.18	0.01		
Brotula barbata	2 1		10	0.07	0.21	1			
Todaropsis eblanae	10		34	0.06	0.11	0.06	0.01		
Scorpaena normani GONOSTOMATIDAE	31 8		14 28	0.06 0.06	0.14	0.03	0.17		
Hoplostethus atlanticus	1		3	0.05		0.01	0.17		
Centroscymnus crepidater	1		3	0.05			0.16	<u> </u>	
Aristeus varidens, male	8		28	0.04	1		0.13		
Aristeus varidens, female Solenocera africana	8 3		28	0.03 0.01	0.01	0.01	0.10		
Glyphus marsupialis	3		10	0.01	0.01	0.01	0.01		
Parapenaeus longirostris	3		10		0.01	0.01			
Plesionika martia	1		3			0.01			
Parapandalus narval Aristeus varidens	1 4		3			0.01			
Other fish				0.68	0.71	0.60	0.83		
Sum all species	16.27	20.87	17.12	10.36					
Sum Snappers									
Sum Groupers							0.01		
Sum Grunts Sum Croakers				0.25	0.74	0.01	0.01		
Sum Seabreams				0.72	1.69	0.18	0.23		
Sum Sharks				1.12	0.49	0.35	2.67		
Sum Rays				0.04	0.06	0.00	0.04		
Sum Squids Sum				0.20	0.19	0.26	0.14		
Sum commercial shrimps				2.19	0.53	2.48	3.79		
					I	1			

C. CABINDA-LUANDA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. BY CAT Lower limits, K		% inci- dence	Mean dens.	Mean densi	ties by bot	tom depth st	rata t/nm²
		00 300 1000		t/nm²	500-600m	600-800m	800-800m	800-800m
Nematocarcinus africanus	3 3	1	58	3.05	5.96	0.15		
MACROURIDAE	4 4 4		100	2.25	1.21	3.30		
Hoplostethus cadenati	5 1 1		58	0.83	0.62	1.05		
GONOSTOMATIDAE	8 3		92	0.65	0.86	0.45		
Hoplostethus mediterraneu	s 2 1		25	0.49	0.04	0.93		
Scyllarides herklotsii	10		83	0.33	0.23	0.42		
Merluccius polli	4 1		42	0.23	0.43	0.04		
Aristeus varidens, female	8		67	0.13	0.17	0.08		
Centrophorus sp.	3 1		33	0.11	0.18	0.03		
Geryon maritae	8		67	0.11	0.06	0.16		
Aristeus varidens, male	7		58	0.10	0.13	0.06		· · · · · · · · · · · · · · · · · · ·
Paromola cuvieri	1		8	0.07		0.15		
Hoplostethus sp.	2		17	0.06	0.10	0.02		
OPHICHTHIDAE	2		17	0.05	0.02	0.08		
ALEPOCEPHALIDAE	1		8	0.05		0.10		
Glyphus marsupialis	4		33	0.02		0.03		
Aristeus varidens	3		25	0.01	0.01	0.01		
Solenocera africana	1		8					
Plesiopenaeus edwardsianu	s 1		8					
Other fish				0.26	0.22	0.31		
Sum all species				8.80	10.24	7.37		
Sum Snappers								
Sum Groupers								
Sum Grunts								
Sum Croakers								
Sum Seabreams								
Sum Sharks				0.21	0.34	0.05		
Sum Rays				0.04		0.10		
Sum Squids				0.02	0.01	0.03		
Sum								
Sum commercial shrimps				3.31	6.27	0.33		

6

Number of stations included in analysis, total and by depth strata 12 6

D. LUANDA-BENGUELA. Demersal species slope.

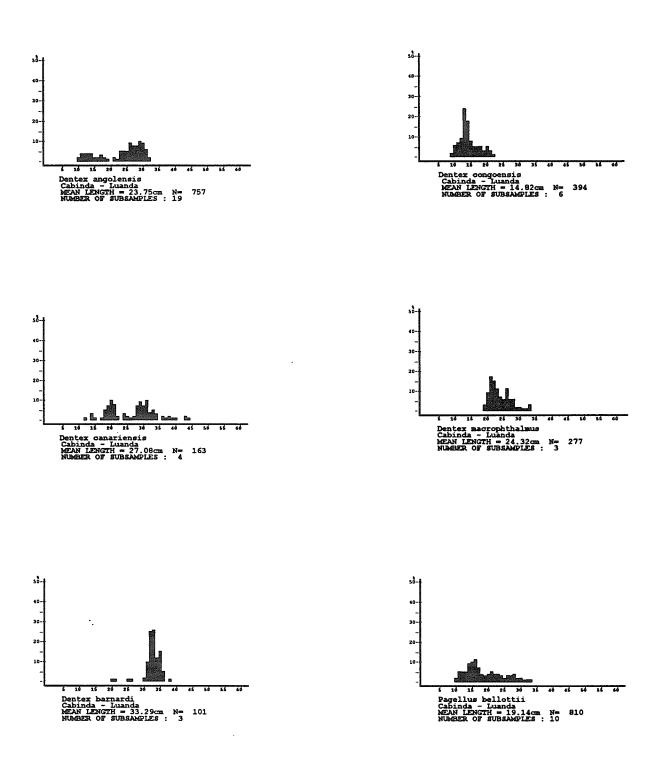
SPECIES NAME SAMPL	E DISTRIB. B			ASSES	% inci- dence	Mean Mean densities by dens.			bottom depth strata t/nm²		
	Lower limi >0 10			0 1000	dence	t/nm ²	200-300m	300-400m	400-500m	500-500m	
Chlorophthalmus atlanticus	92	1		2	76	6.34	16.45	2.94	0.04		
Pentheroscion mbizi	2	2		1	20	2.98	9.29	0.01	0 10		
Merluccius polli	6 11 5 3	4	1		88 44	2.63	4.07	1.78 0.94	2.13 2.35		
Hoplostethus cadenati Dentex macrophthalmus	5 3 1 1	3 1	1		16	0.87	2.73	0.54	2.00		
Dentex macrophthatmus		1									
Synagrops microlepis	3 2		1		24 44	0.66	2.00	0.07	1.48		
Nematocarcinus africanus	64 56	1			44	0.57	0.03	0.68	0.88		
Laemonema laureysi Gephyroberyx darwini	7	1			32	0.53	0.17	1.24	0.03		
MACROURIDAE	17 3	ĩ			76	0.47	0.44	0.52	0.45		
Pterothrissus belloci	9 5				56	0.46	0.74	0.61			
Erythrocles monodi	1	1			8	0.36	1.11				
Parapenaeus longirostris, fem.	8 4				48	0.28	0.54	0.30	0.01		
Centrophorus granulosus	4 2				24	0.28	0.28	0.27	0.31		
GOBIIDAE	1	1			8	0.24	0.58		0.18	<u>.</u>	
SHARKS	82				40	0.22		0.05	0.63		
Parapenaeus longirostris, male	92				44	0.19	0.42	0.15	0.50		
Aristeus varidens, female	8 1 7 2				36	0.17 0.17		0.02	0.50		
GONOSTOMATIDAE Zenopsis conchifer	12 1				48	0.16	0.44	0.05	0.01		
·								+			
Deepwater fish mixture	1				4	0.10		0.27	0.25		
Aristeus varidens, male	9 12				36	0.08		0.01	0.25		
LOPHIIDAE Illex coindetii	13				52	0.07	0.04	0.06	0.09		
Geryon maritae	12				48	0.07	0.02	0.09	0.10		
Todaropsis eblanae	5				20	0.05	0.15	0.01		·····	
Parapenaeus longirostris	2				8	0.02	0.05				
Plesiopenaeus edwardsianus	2				8	0.01		0.03			
Solenocera africana	4				16			0.01	0.01		
Glyphus marsupialis	. 4				16				0.01		
Aristeus varidens Other fish	1				4	0.68	0.91	0.77	D.35		
Sum all species						20.34	40.47	11.24	10.43		
Sum Snappers											
Sum Groupers								1	1		
Sum Grunts										1	
Sum Croakers						2.99	9.32	0.01			
Sum Seabreams						0.93	2.91	0.37	0.96	1	
Sum Sharks						0.53	0.28	0.3/	0.80		
Sum Rays Sum Squids						0.01	0.03	0.07	0.09		
Sum Squios Sum						0.10	0.21				
Sum commercial shrimps						1.32	1.02	0.77	2.24	[
						, ш,					
Number of stations included in	analysis, to	otal a	and by	y depth	strata	25	8	9	8		

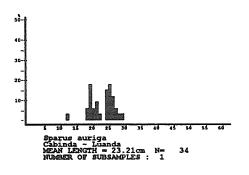
D. LUANDA-BENGUELA. Demersal species slope cont.

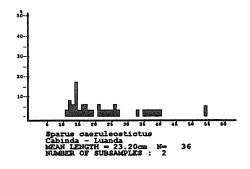
SPECIES NAME	SAMPLE DISTRIB. BY CA Lower limits,		% inci- dence	Mean Mean densities by bottom dens.		tom depth si	lepth strata t/nm²	
		100 300 1000		t/nm²	500-600m	600-800m	800-800m	800-800m
Nematocarcinus africanus	4 1	1	75	2.64	4.11	0.21		
MACROURIDAE	4 2 2		100	1.77	0.70	3.55		
Merluccius polli	2 5		88	1.21	1.83	0.19		
GONOSTOMATIDAE	6 1 1		100	1.13	0.85	1.60		
Hoplostethus cadenati	6 2		100	1.03	0.83	1.36		
Aristeus varidens, female	6 1		88	0.31	0.35	0.25		
Scyllarides herklotsii	7		88	0.31	0.18	0.52		
Geryon maritae	6		75	0.16	0.15	0.17		
Aristeus varidens, male	7		88	0.14	0.18	0.08		
OPHIDIIDAE	2		25	0.14	0.11	0.19		
CRABS	1		13	0.12		0.32		
Etmopterus spinax	5		63	0.11	0.16	0.01		
Centrophorus granulosus	1		13	0.11	0.17			
OPHICHTHIDAE	2		25	0.10	0.15	0.01		
Deepwater fish mixture	1		13	0.09	0.14			
CONGRIDAE	4		50	D.08	0.04	0.14		
LOPHIIDAE	5		63	D.06	0.08	0.03		
NETTASTOMATIDAE	2		13	0.05		0.13	1	
Plesiopenaeus edwardsianus			50	0.01	0.01	0.01		
Aristeus varidens	1		13	0.01		0.02		
Glyphus marsupialis	1		13			0.01		
Other fish				0.15	0.14	0.21		
Sum all species				9.73	10.18	9.01		
	· · · · · · · · · · · · · · · · · · ·							
Sum Snappers								
Sum Groupers				0.01		0.03		
Sum Grunts								
Sum Croakers								
Sum Seabreams								
Sum Sharks				0.22	0.33	0.01		
Sum Rays								
Sum Squids				0.08	0.10	0.07		
Sum				0.44	1 05	0.50		
Sum commercial shrimps				3.11	4.65	0.58		

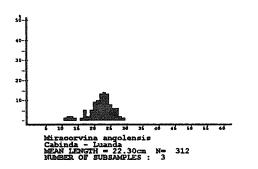
Number of stations included in analysis, total and by depth strata 8 5 3

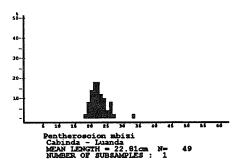
Annex II. Length distributions of main species

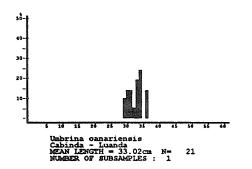


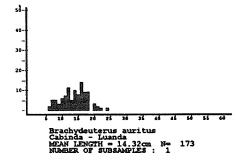


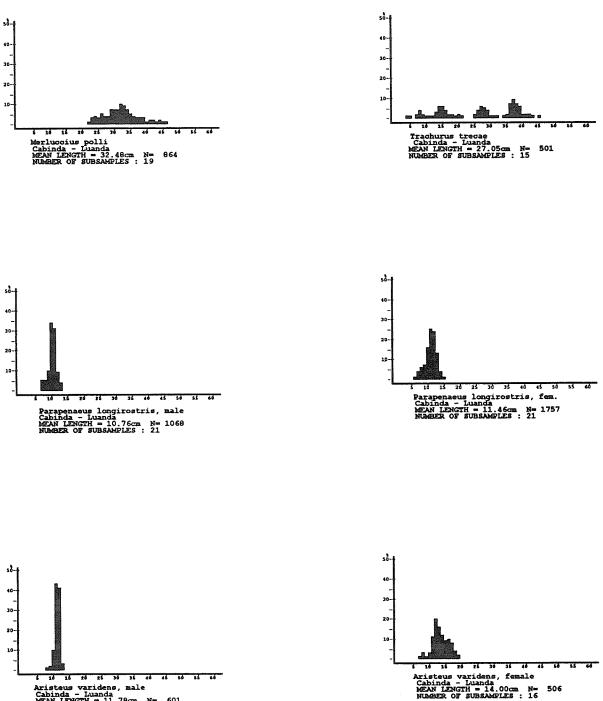




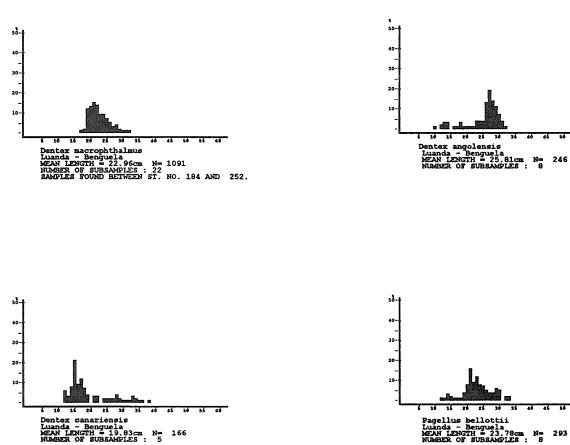


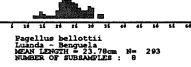


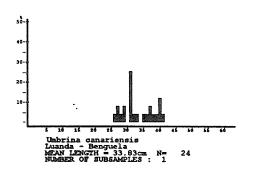


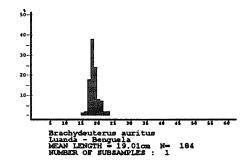


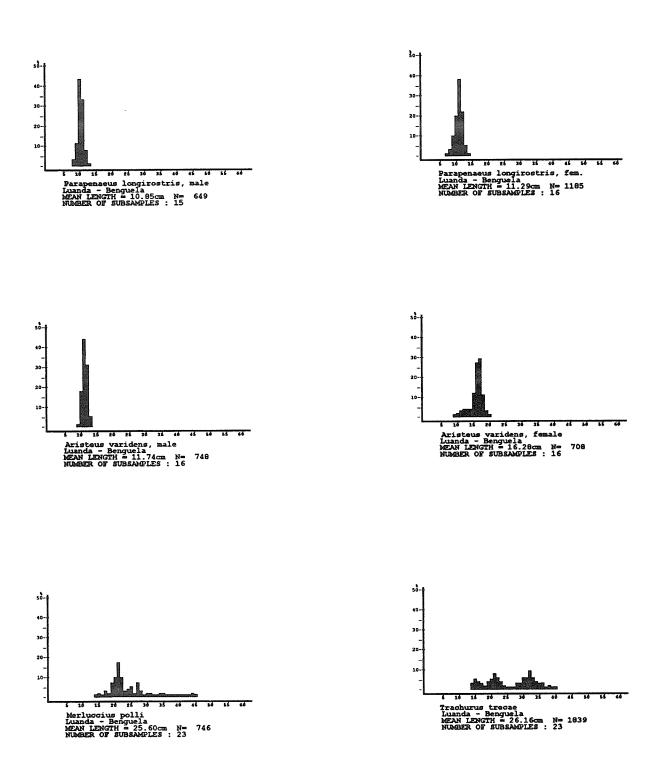
Aristous varidens, male Cabinda - Luanda MCAN LENGTH = 11.78cm N= 601 NUMBER OF SUBSAMPLES : 15

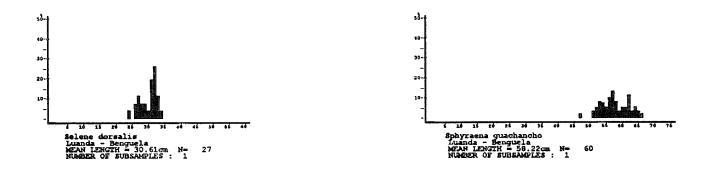












Annex III Records of fishing stations

Total

Total

	1	ROJECT STATION	1: 108
DATE: 2/ 9/94 GEAR T	YPE: BT Not6 PO:	ITION:Lat 5	523
start stop duration		Long E	435
TIME :06:17:00 06:47:00 30 (mi	n) Purpose code:	3	
LOG : 612.90 6130.50 1.50	Area code	1	
FDEPTH: 83 94	GearCond.code		
BDEPTH: 83 94	Validity code		
Towing dir: 280° Wire out	1 300 m Speed: 32	kn*10	
Sorted: 95 Kg Total catch	12 243.04 CA	CH/HOUR 4	6.08
SPECIES	CATCH/HOUR	N OF TOT. C	SAMP
	weight number:		
Trachurus trecae	159.46 33		187
Synagrops microlepis	115.18 4596		
Miracorvina angolensis	66.12 68		188
Trichiurus lepturus	45.86 10		
Pterothrissus belloci	30.76 18		190
Sardinella aurita	19.46 4		189
Dentex angolensis	15.78 5		191
Sarda sarda	12.40		
Brotula barbata	6.22 1		
Citharus linguatula	4.84 9		
Stromateus fiatola	4.62		
Chelidonichthys gabonensis	1.48 1		
Cynoglossus senegalensis		0.25	
Zeus faber		5 0.19 5 0.12	
Pegusa lascaria			
Uranoscopus cadenati	0.30 2		
Illex coindetii	0.30 1		
Parapenaeus longirostris	0.26 4		
Merluccius polli		5 0.02	
Scorpaena normani		5 0.01	
Saurida brasiliensis	0.04 1		
Todaropsis eblanae	0.04	5 0.01	
Total	485.96	99.98	

DATE: 2/ 9/94	GEAR TYPE: BT N		JECT STATIO ION:Lat 5	
	SEAR ITPET BIN	010 10511		
		se code: 3	Long E	113
LOG :5138.30 5139.40 1. FDEPTH: 168 200		ond.code:		
BDEPTH: 168 200		ity code: 1		
Towing dir: 350° Wi				
lowing dirt 350 wi	Ie Out: SOU M	speed: 24 k		
Sorted: 100 Kg Total	catch: 250.	23 CATCH	I/HOUR: 5	00.46
SPECIES	CATC	H/HOUR 1	OF TOT. C	SAM
	weight	numbers		
Diaphus sp.	204.86		40.93	
Miracorvina angolensis	78.16		15.62	19
Trichiurus lepturus	74,66		14.92	
Epinephelus goreensis	33.80		6.75	
Brotula barbata	25.88		5.17	
Dentex angolensis	22.58		4.51	192
Pterothrissus belloci	15.06		3.01	
Zenopsis conchifer	10.26		2.05	
Umbrina canariensis	9.62		1.92	
Uranoscopus polli	6.62		1.32	
Parapenaeus longirostris, fem.	5.56		1.11	19
Branchiostegus semifasciatus	4.94		0.99	
Parapenaeus longirostris, male	2.94		0.59	19
Synagrops microlepis	2.66		0.53	
Scorpaena normani	1.26		0.25	
Grammoplites gruveli Todaropsis eblanae	0.40		0.06	
Todaropsis epianae Coelorinchus coelorhincus	0.32		0.05	
Sepia sp.	0.24		0.03	
Citharus linguatula	0.18		0.04	
Spicara alta	0.12		0.02	
Trachurus trecae	0.04		0.01	
Selene dorsalis	0.02		5.01	
Total	500 40		99 97	

Total

Total	500.40		99.97	
Start stop duration TIME :09:47:00 10:17:00 30 (min LOG :5143.00 5144.40 1.40 FDEPTH: 286 312 BDEPTH: 286 312	Area cod GearCond Validity	Code: 3 le : 1 l.code: code: 1	ECT STATION ON:Lat S Long E	110 5525 1134
Towing dir: 359° Wire out: Sorted: 62 Kg Total catch:	950 m Spe 82.82	ed: 30 kn CATCH/		5.64
SPECIES	CATCH/H	IOUR 1	OF TOT. C	SAMP
		umbers		
Merluccius polli	39.46	210	23.82	196
Scorpaena normani	36.64	208	22.12	
Krill	32.12		19.39	
Pterothrissus belloci	11.42	64	6.89	
Diaphus sp.	7.90	1508	4.77	
MACROURIDAE	7.84	114	4.73	
Zenopsis conchifer	5,94	8	3.59	
Miracorvina angolensis	5.22	19	3.15	
Parapenaeus longirostris, fem.	4.78	482	2.89	198
Chlorophthalmus atlanticus	2.26	42	1.36	
Parapenaeus longirostris, male	1,90	192	1.15	197
Trachurus trecae	1.50	16	0.91	
SHARKS	1.50	18	0,91	
Coelorinchus coelorhincus	1.14	22	0,69	
Aristeus varidens	0.94	6	0.57	
Todarodes sp.	0.94	18	0.57	
Pegusa lascaris	0.82	24	0.50	
Pontinus accraensis	0.58	2	0.35	
Illex coindetii	0.50	176	0.30	
Malacocephelus occidentalis	0.42	6	0.25	
Hoplostethus mediterraneus	0.40	2	0.24	
Raja clavata	0.38	8	0.23	
Cynoponticus ferox	0.34	8	0.21	
Peristedion cataphractum	0.26	10	0.16	
Synagrops microlepis	0.24	176	0.14	
Sepia sp.	0.14	62	0.08	
Parapandalus narval	0.06	6	0.04	

165.64

100.01

DATE: 2/ 9/94	GEAR TYPE: BT	Not6 POS	TION:Lat	5 5315
	uration		Long	g 1130
TIME :12:07:00 12:37:00	30 (min) Purp	ose code:	3	
LOG 15155.90 5157.60	1.70 Area	code 1	1	
FDEPTH: 398 434	Gear	Cond.code:		
BDEPTH: 398 434	Vali	dity code:	1	
Towing dir: 356"	Wire out:1200 m	Speed: 31	kn*10	
Sorted: 68 Kg Tot	al catch: 444	.32 CAT	CH/BOUR:	888,64
SPECIES	CAT	CH/HOUR	N OF TOT. C	SAMP
	weight	numbers		
Centrophorus granulosus	670.0	0 50	75,40	
Merluccius polli	69.0	0 164	7.76	
Centroscymnus crepidater	48.6	0 116	5.47	
Nematocarcinus africanus	30.4		3.42	
MACROURIDAE	23.6			
Hoplostethus mediterraneus	13.9			
Trichiurus lepturus	11.0		1.24	
GONOSTOMATIDAE	7.1	2 244	0.80	
Raja clavata	4.5	6 12	0.51	
Lophius vaillanti	4.4	0 4	0.50	
Aristeus varidens, female	1.5			199
Illem coindetii	1.0	4 8	0.12	
Aristeus varidens, male	0.7			200
Scyllarides herklotsii	0.6	4 52	0.07	
Total	\$\$6.6	ā	99.79	

PROJECT STATION: 111

			PI	ROJECT STA	TION: 112
DATE: 2/ 9/94	GEAR TYPE	II BT Not6	POST	ITION: Lat	5 531
start stop	duration			Long	E 1130
TIME 116:31:00 17:01:00		Purpose	codes		
LOG :5172.80 5174.50		Area cod	e :	1	
FDEPTH: 543 598		GearCond	. code:		
BDEPTH: 543 598		Validity	code:	1	
Towing dir: 22*	Wire out:15				
Sorted: 38 Kg To	tal catch:	64.66	CAT	CH/HOUR:	129.32
SPECIES		CATCH/H		N OF TOT.	C SAMP
	•		uzbers		
Centrophorus sp.		35.10	72	27.1	
MACROURIDAE		30.90	490		
Aristeus varidens, male		14.86	1982		
RHINOCHIMAERIDAE		14.00	2		
Hoplostethus mediterraneus		7.80	154		
Aristeus varidens, female		7.66	510		
GONOSTOMATIDAE		5.80	162		
Geryon maritae		4.80	10		
OPHICHTHIDAE		4.78	88	3.7	0
Halosaurus sp.		3.58	84		
Glyphus marsupialis		0.04	4	0.0	3

129.32

99.99

	PROJECT STATION: 1	113
DATE: 2/ 9/94 GEAR TYP	E: BT No:6 POSITION:Lat 5 55	538
start stop duration	Long E 11	116
TIME :19:31:00 20:01:00 30 (min)	Purpose code: 3	
LOG :5186.10 5187.60 1.50	Area code 1 1	
FDEPTH: 765 830	GearCond.code:	
BDEPTH: 765 \$30	Validity code: 1	
Towing dir: * Wire out:2	100 m Speed: 30 kn*10	
Sorted: 25 Kg Total catch:	57.76 CATCH/HOUR: 115.5	52
SPECIES		MP
	weight numbers	
MACROURIDAE	52.38 904 45.34	
ALEPOCEPHALIDAE	17.09 68 14.79	
OPHI CHTHI DAE	14.76 176 12.78	
Aristeus varidens, female		204
Glyphus marsupialis	5.80 198 5.02	
Halosaurus sp.	5.52 84 4.79	
Scyllarides herklotsii	5.30 400 4.59	
Hoplostethus sp.	3,92 64 3,39	
Aristeus varidens, male	1.70 272 1.47 2	203
Centrophorus sp.	1.16 10 1.00	

115.46

-99.95

	PROJECT STATION: 114
DATE: 3/ 9/94 GEAR T	YPE: BT No:6 POSITION:Lat S 547
start stop duration	Long E 1120
	n) Purpose code: 3
LOG :5256.70 5228.30 1.60	Area code 1 1
FDEPTH: 455 516	GearCond. code:
BDEPTH: 455 516	Validity code: 1
Towing dir: 180° Wire out	
toaing arts 180 alta out	11200 m Speedt 52 km-10
Sorted: 48 Kg Total catch	144.32 CATCH/HOUR: 288.64
SPECIES	CATCH/HOUR) OF TOT. C SAMP
	weight numbers
Hoplostethus mediterraneus	210.00 2610 72.75
Nematocarcinus africanus	45.00 6672 15.59
Centrophorus granulosus	15.30 36 5.30
MACROURIDAE	5.#2 168 2.02
GONOSTOMATIDAE	4.80 168 1.66
Merluccius polli	3.96 6 1.37
Centroscymnus crepidater *	3.72 72 1.29
Aristeus varidens, male	0.48 78 0.17 205
Conger conger	0.36 6 0.12
Scyllarides herklotsii	0.30 72 0.10
Aristeus varidens, female	0.10 12 0.06 206
Total -	289.92 100.43

DATE: 3/ 9/94 GEAR	TYPE: BT Nor		IBCT STATIO	
start stop duratio		6 POSITI		550
	n min) Purpose	code: 3	Long E	1120
LOG 15247.30 5249.00 1.20	Area co			
FDEPTH: 302 321		d.code:		
BOEPTH: 302 321		v code: 1		
Towing dir: 300' Wire of			*10	
Sortad: 61 Kg Total cat	ch: 185.33	CATCH/	HOUR: 3	70.66
SPECIES	CATCH	1010	or tot. c	SAMP
120182	weight	NUUK %	or for, c	SAMP
Chlorophthalmus atlanticus	90.00	132	24.20	
ferluccius polli	\$7.60	450	23.63	207
Denter Angolensis	62.40	314	16.83	208
17 SCELLANEOUS	26.20	310	7.07	200
Parapenaeus longirostris, fem.	21.36	2010	5.76	209
tarothrissus belloci	18,30	90	4.94	
ACRAIRI DAE	17.76	510	4.79	
feichiurus lepturus	12.48	96	3.37	
Scorpaena normani	11.40	420	3.08	
fodaropsis eblance	7.56	60	2.04	
Centrophorus granulosus	6.00	12	1.62	
Parapenaeus longirostris, male	5.22	522	1.41	210
risteus varidans	1.20	336	0.32	
ichedophilus pemarco	1.08	6	0.29	
Synagrops microlepis	0.\$4	12	0.23	
tepis sp.	0,60	30	0.16	
CONGRIDAE	0.42	6	0.11	
loplostethus mediterraneus	0.24	12	0.06	
fotal	370.66		99.99	

DATE: 3/ 9/94 GEAR T	YPE: BT No		DJECT STATIO	
start stop duration		10 1001	Long 5	
TIME 108140100 09110100 30 (min		a coda:		
LOG 15259.00 5260.50 1.50	Area c			
FDRPTH: 205 222		nd.code:	•	
BDEPTH: 205 222		ty code;	1	
Towing dir: 330" Wire out:				
		pecu:		
Sorted: 142 Kg Total catch	: 303.5	0 CATO	H/HOUR: 6	07.00
SPECIES	CATCH	/HOUR	or tot. c	SAMP
	weight	numbers		
Miracorvina angolensis	158.52	442	26.12	212
Pterothrissus belloci	94.42	654	15.56	
Synagrops microlepis	93.80	3370		
Denter angolensis	\$9.90	260	14.91	211
Conger conger	\$3.24	10	13.71	
Trichiurus lepturus	23.40	96	3.86	
GOBIIDAE	14.14	4990	2.33	
Zeus faber	10.84	102	1.79	
Parapenaeus longirostris, fem.	6.28	378	1.03	213
Brotula harbeta	6.26	10	1.03	
Umbrina canariensis	5.58	10	0,92	
Squatina oculata	4.14	10	0,68	
Uranoscopus polli	3.82	22	0.63	
Chelidonichthys gabonensis	2.70	26	0.44	
Chlorophthalmis atlanticus	2.54	64	0.42	
Todaropsis ablanae	1.92	32	0.32	
Parapaneeus longirostris, male	1.54	196	0.25	214
Raja clavata	1.32	10	0.22	
Spicara alta	1.06	10	0.17	
Scorpaena normani	0.52	6	0.09	
Sepia sp.	0.42	22	0.07	
Peristedion cataphractum	0.42	10	0.07	
SOLEIDAE	0-14	10	0.02	
Total	607.00		100.01	

			P	ROJECT STAT	ION: 117
DATE: 3/ 9/94	GEAR TYP	5: BT No	16 POS	TIONILAT	S 548
start stop du	uration			Long	E 1142
TIME :11:38:00 12:08:00	30 (min)	Purpor	e code:		
LOG :5274.60 5275.90 1	1.30	Area o	code i	1	
TOEPTH: 96 89		GearCo	ond.code:		
BDEPTH: 96 89		Valids	ty code:	1	
Towing dir: 120° W	fire out:	600 m 5	peed: 31	kn*10	
Sorted: 05 Kg Tota	al catch:	284.4	19 CAT	CH/HOUR:	568,98
SPECIES		CATC	I/HOUR	I OF TOT.	C SAMP
		Weight	nusbers		
Pentheroscion mbizi		180.04	1716	31.64	217
Trichiurus lepturus		\$8.02	406	15.47	
Synagrops microlepis		\$3.36	23084	14,65	
Pterothrissus belloci		38.68	266	6.00	
Squatina oculata		36.34	6	6.39	
Trachurus trecae		27.68	106	4.86	219
Dentex angolensis		21.00	84	3.69	218
Uranoscopus polli		19.68	200	3.46	
Brotuls berbeta		13.40	20	2,36	
Zeus faber		12.98	14		
Citherus lingustula		7.60	140	1.34	
Chelidonichthys gabonensis		7.34	66	1.29	
Zenopsis conchifer		6.40	6	1.12	
Parapenaeus longirostris, fem.	•	6.20	\$46	1.09	216
Scorpaens normani		4.60	74		
Scorpeens stephanica		4.60	6	0.\$1	
GOBIIDAE		3.26	240	0.57	
Dentez canariensis		2.26	14	0.40	
Parapenaeus longirostris, male	•	2.06	412		
Illes coindetii		1.26	86		
Sepia officinalis hierredda		0.74	106		
Sautida braziliensis		0.46	\$0		
Todaropsis eblanae		0.45	20		
Boops boops		0.26	14		
Chlorophthelmus atlanticus		0.20	14	0.04	
Lepidotrigle carolae		0.20	14	0.04	
Total		568.98		100.01	

		2ROJEC	T STATION	1118
DATE: 3/ 9/94 GEAR TY	PE: BT Not6	POSITION	iLat S	547
start stop duration			Long E	1153
TIME :13:40:00 14:10:00 30 (min)) Purpose con	de: 3		
LOG :5286.70 5288.20 1.50	Area code	: 1		
FDEPTH: 53 54	GearCond.c	odet		
BDEPTH: 53 54	Validity c			
Towing dir: 165° Wire out:	200 m Speed	: 30 kn*1	D	
Sorted: 88 Kg Total catch:	353.43	CATCH/HO	UR: 70	6.86
SPECIES	CATCH/HOU		тот. с	SAMP
		bers		
Selene dorsalis	252.26	932	35.69	220
Trichiurus lepturus		4216	21.32	
Brachydeuterus auritus	67.10	924	9.49	
TURTLES	60.00	2	8.49	
Trachurus tracae	37.40	152	5.29	221
Pentheroscion mbizi	26.04	448	3.68	
Sphyrasna guachancho	20.16	14	2,85	
Pterothrissus belloci	20.16	118	2.85	
Scomber japonicus	17.16	74	2.43	
Raja mireletus	10.26	30	1.45	
Pseudotolithus senegalensis	9.90	8	1,40	
Cynoglossus senegalensis	8.58	22	1.21	
Pseudotolichus typus	\$.50	8	1.20	
Penacus notialis, female	4.46	96	0.63	222
Pegusa lascaris	3.22	30	0.46	
Citherus linguatula	3.08	132	0.44	
Torpedo torpedo	3.08	8	0.44	
Sepia officinalis hierredda	1.40	52	0.20	
Parapenasus longirostris, fem.	0.96	140	0.14	225
Aulopus cadenati	0.74	22	0.10	
Brotula barbata	0.58	14	0.08	
Scorpaena normani	0.44	14	0.06	
Panaeus notialis, male	0.36	22	0.05	223
Parapenasus longirostris, male	0.08	16	0.01	224
Scyllarides herklotsii	0.08	\$	0.01	
Panulicus regius	0.00	\$	0.01	
Squilla mantis	0.00	14	0.01	
Total	706.86		99.99	

										1	ROJE	T STA		r 119
DATE:	3/	9/94				GE	AR TY	PE: BT	Note	PO	ITIO	liLat	5	633
		star	t	sto	P	durat	ion					Long	Ξ	1203
TIME	:17	:00:	00	17:3	0100	30	(min) Pur	pose	codes	3	•		
LOG	:53	13.0	0	5314	. 50	1.50		Are	a cod	a 1	1			
FORPTI	H:	- 4	0		44			Gea	rCond	. code :				
BDEPTI	Ħ:	- 4	0		44			Val	idity	codes	1			
	To	wing	đi	r: 1	80°	Wire	out:	150 m	Spe	ed: 33	kn*]	10		
Soc	ted:	145	Kg	ı	To	tal c	atchi	62	0.91	CAT	CH/H	UR:	124	1.82

SPECIES	CATCH	I/HOUR	1 OF TOT. C	SAMP
	weight	numbers		
Denter gibbosus	676.72	420	54.49	
Scops boops	183,22	7906	14.75	
Dentex barnardi	147.52	136	11.38	
Epinephelus meneus	47,00	6	3,78	
Sparus pagrus africanus	37,06	42	2.98	
Sphyraena sphyraena	33.90	72	2.73	
Sparus caeruleostictus	30.66	42	2.47	
Raja miraletus	29.01	64	2.34	
Dentex canariensis	19.10	42	1.54	
Torpedo torpedo	10.18	10	0.#2	
Epinephelus goreensis	10.00	2	0.81	
Zous faber	7.02	10	0.57	
Argyrososus hololepidotus	5,90	2	0.48	
Parapristipomā octolineatum	2.30	2	0.19	
Loligo sp.	0.72	2940	0,06	
Plactorhinchus mediterraneus	0.62	10	0.05	
Chaetodon hoefleri	0.52	22	0.04	
Trachurus trecae	0.30	240	0.02	
Total	1241.82		100.00	

								2	ROJECT	STAT	TON	: 120
DATE:	3/ 9	/94		GE	AR TY	P5: BT P	1016	105	ITIONI	Lat	5	611
		tert	stop	durat	ion				1	Long	E.	1138
TIKE	:20 z	18:00	20140100	30	(min) Purpo		de :	3	•		
LOG	:533	8,40	\$339.50	1.10		Area	code	:	1			
FORFTH	:	116	126			Geard	Cond. c	ades				
BORPTH	1	116	126			Valio	iity c	odet	1			
	Tow	ing di	tr: 265*	Wire	outs	350 m	Speed	: 25	kn*10			

Sorted: 113 Kg Total catch:	113.3	5 CATO	H/HOUR:	226.70
SPBCIES	CATCH		I OF TOT.	C SAMP
	weight	numbers		
Dentes congoensis	\$2,80	1038	36.52	226
Chelidonichthys gabonensis	30.70	480	13.54	
Dentex angolensis	28.20	116		
Citherus lingustule	13.00	24\$		
Toderopsis ablanas	9.50	384		
Pterothrissus belloci	9.20	60		
Spicara alta	\$.6 0	16	3,79	
Brotula barbata	5.92	4	2.61	
Miracorvina angolensis	5.10	6	2,25	
Umbrina Canariensis	4.70	14	2,07	
Synagrops microlepis	4.60	250		
Trichiurus lepturus	4.22		1.86	
Boops boops	3.40	198	1.50	
Pagellus bellottii	3.10	74	1.37	228
CONGRIDAE	2.72	186	1.20	
Denter bernardi	2.50	2	1.10	
Uranoscopus polli	1.62	18	0.71	
Branchiostegus semifasciatus	1.10	2	0.49	
Trachurus trecae	0.94	26	0.41	
Scomberomorus tritor	0.84	4	0.37	
Zeus faber	0.82	2	0.36	
Zeus faber	0.\$2	2	0.36	
Serrenus cabrilla	0,78	30	0.34	
Dicologoglossa hexophthelma	0.42	12	0.19	
Peristedion catephractum	0.24	6	0,11	
Sepia sp.	0.18	4	0.08	
HACROURIDAE	0.10	4	0.04	
Total	226.12		99,72	

DATE: 3/ 9/94 GEAR T	YPE: BT No:6		CT STATIO	
start stop duration			Long E	
TIME :23:45:00 00:15:00 30 (mi LOG : 538,70 5360.00 1.30	 h) Furpose of Area code 			
FDE2TH: 556 552 BDEPTH: 556 552	GearCond. Validity	code: code: 1		
Towing dir: 180° Wire out	1650 m Spee	d: 27 kn*	10	
Sorted: 22 Kg Total catch	: 67,08	CATCH/H	DUR: 1.	34.16
SPECIES		UR 10	г тот. с	SAMP
Nematocarcinus africanus	weight nu 98.40		73.35	
Hoplostethus cadenati GONOSTOMATIDAB	\$.34 6.30	132 180	6.22 6.70	
Diaphus sp.	6.00	150	4,47	220
Aristeus varidens, femele MACROURIDAE	5.94 3.24	456 54	4.43 2.42	230
Aristeus varidens, male	1,74	216	1.30	229
Etmopterus spinaz Scyllarides herklotsii	Q.96	120	0.72	
Geryon maritae Peristedion cataphractum	0.66	6 18	0,49 0,45	
Lepidotrigla carolae Sepia sp.	0.42	18 12	0.31	
			100.02	
Total	134.16		144.02	
		_		
DATE: 4/ 9/94 GEAR T start stop duration	YPE: BT No:6	PROJE POSITIC	CT STATIO Nilat S Long E	620
TIME :02:30:00 03:00:00 30 (ml	n) Purpose	code: 3	Long L	****
LOG :5369.70 5371.00 1.30 FDEPTH: 710 708	Area code GearCond			
BORPTH: 710 708	Validity	code: 1	10	
Towing dir: 175° Wirs out				
Sorted: 27 Kg Total catch	63.03	CATCH/H	10UR: 1	26.06
SPECIES	CATCH/H	DUR 10	F TOT. C	SAMP
MACROURIDAE	waight n 70.20	umbern 744	55.69	
Paromola cuvieti	22.80	8 300	18.09	
GONOSTOMATIDAE Scyllarides herklotsii	15.90 9.48	486	12.61	
Hoplostethus cadenati Aristeus varidens	5.70 0.96	48 42	4.52	
Illex coindetii	0.78	6	0.62	
Pleziopenasuz edwardzianuz -	0.24	12	0.19	
Total	126.06		100.00	
BDEPTH: 445 445 Towing dir: 130° Wire out Sorted: 57 Kg Total catch		CATCH/I		15.30
SPECIES	CATCH/H		ог тот. с	SAMP
HACROURI BAZ		umbets 1062		
Merluccius polli Scyllarides herklotsii	38.00		49.58	
LOPHIIDAS	4.36	104 376	49.58 32.96 3.7#	231
Centrophonus consultante	4,36 3,04	104 376 \$0	32.96 3.78 2.64	231
Centrophorus granulosus Hoplostethus cadenati	4,36 3,04 2,84 2,56	104 376 \$0 58 40	32.96 3.7# 2.64 2.46 2.22	231
Hoplostethus cadenati EXOCOSTIDAE	4.36 3.04 2.84	104 376 \$0 \$8	32.96 3.7# 2.64 2.46	231
Hoplostethus cadenati EXOCORTIDAE Raja sp. Nematocarcinus africanus	4,36 3.04 2.84 2.56 1.40 1.08 1.06	104 376 \$0 58 40 4 2 218	32.96 3.7# 2.64 2.46 2.22 1.21 0.94 0.92	231
Hoplostethus cadenati EXOCOSTIDAE Raja sp. Nematocascinus africanus Glyphus mersupialis Aristeus veridans, female	4,36 3.04 2.84 2.85 1.40 1.08 1.05 0.96 0.82	104 376 \$0 \$8 40 4 2 218 16 90	32.96 3.78 2.64 2.46 2.22 1.21 0.94 0.92 0.83 0.71	231 232
Hoplostethus cadenati Exocogridae Raja sp. Nematocarcinus africanus Glyphus macsupialis	4,36 3,04 2,84 2,56 1,40 1,08 1,08 1,06 0,96	104 376 \$0 58 40 4 2 218 16	32.96 3.78 2.64 2.22 1.21 0.94 0.92 0.83	
Hoploststhus cademati EXOCOSTIDAE Raja 39. Nematocarcinus africanus Glyphus mersupialis Aristeus varidans, femele Halomaruus 39. OPHIDIIDAE BKIONIDAE	4.36 3.04 2.84 2.56 1.40 1.08 1.08 1.06 0.96 0.82 0.66 0.58 0.34	104 376 \$0 58 40 4 2218 16 90 26 2 2 2	32.96 3.78 2.64 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.29	
Hoplostethus cadenati EXOCOSTIDAE Namatocarcinus africanus Glyphus arrupialis Aristeus veridens, femele Balosaurus sp. OHHDIIDAE	4.36 3.04 2.84 2.56 1.40 1.08 1.06 0.96 0.82 0.66 0.58	104 376 \$0 58 40 4 218 16 90 26 2	32.96 3.78 2.64 2.46 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50	
Hoplostethus cadenati ExOcostIDAE Naja sp. Sentocarcinus africanus Glyphus marsupialis Aristeus veridans, femele Halosavus sp. OPHIDIIDAE BEIOWIDAE DEIOWIDAE ChlorophthalBus atlanticus	4.36 3.04 2.84 2.56 1.40 1.08 1.06 0.96 0.82 0.66 0.58 0.34 0.14	104 376 40 40 218 16 90 26 2 2 2	32.96 3.78 2.64 2.46 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.29 0.12	232
Hopiostathus cadenati Exocostruta Namatocarcinus africanus Glyphus marsupialis Aristeus veridens, femele Halosarurus 39. OPHIDITAAE BRIGNIDAE ChlocophthalMus stlanticus Aristeus varidens, male	4,36 3,04 2,84 2,56 1,08 1,08 1,06 0,96 0,82 0,66 0,58 0,34 0,14 0,14	104 376 40 40 218 16 90 26 2 2 2	32.96 3.77 2.64 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.29 0.12 0.12	232
Hoplostathus cademati EXOCOSTIDAE Raja 39. Nematocarcinus africanus Glyphus marsupialis Aristeus varidens, femele Balonaurus 39. OPHIDITAAE BRIGHIDAE Chlorophthalmus atlenticus Aristeus varidens, male Total DATE: 4/ 9/94 GEAR 7	4.36 3.04 2.84 2.56 1.40 1.08 1.08 0.96 0.96 0.58 0.34 0.14 0.14 115.14	104 376 \$0 \$4 4 2 218 16 90 26 2 2 2 20 20	32:96 3.78 2.64 2.62 2.22 1.21 0.94 0.92 0.93 0.71 0.50 0.23 0.12 93.85 BCT STATIC ONILES	232 233 Wi 124 529
Hoplostethus codenati EXOCORTIONE Raja 59. Nematocaccinus africanus Glyphus maruupialis Aristeus veridens, femele Balogaurus 59. OPHIDITAR BRIONDAR Chlorophthalmus atlanticus Aristeus varidens, male Total DATE: 4/ 9/94 GEAR 7 start stop duration TIME (7715:00 07150:00 35 (ma)	4.36 3.04 2.84 2.56 1.40 1.08 1.08 0.96 0.96 0.58 0.34 0.14 0.14 115.14	104 376 80 58 40 42 2218 16 90 226 22 2 2 2 2 2 2 2 0 90 PROJ POSITI: code: 3	32:96 3.78 2.64 2.62 2.22 1.21 0.94 0.92 0.93 0.71 0.50 0.23 0.12 93.85 BCT STATIC ONILES	232 233 Wi: 124
Hoplostethur cadenati Exocostiuda Raja sp. Nematocarcinus africanus Glyphus marsupialis Aristeus veridans, feměle Ralosavrus sp. OHHDILOAS BRIGHIDAS BRIGHIDAS BRIGHIDAS Total DATE: 4/ 9/94 GEAA 7 start stop duration	4.36 3.04 2.84 2.55 1.40 1.08 0.96 0.82 0.34 0.34 0.14 115.14	104 376 80 80 40 4 2 218 16 2 6 2 2 2 2 2 2 2 2 2 2 0 90 90 90 90 90 90 90 90 90 90 90 90 9	32:96 3.78 2.64 2.62 2.22 1.21 0.94 0.92 0.93 0.71 0.50 0.23 0.12 93.85 BCT STATIC ONILES	232 233 MH 1 124 5 629
Hoplostethur cadenati Exocostiuda Raja sp. Nematocaccinus africanus Glyphus marsupialis Aristeus veridans, femèle Ralosaurus sp. OHIDIIDAE BRIGHIDAE DATE: 4/ 9/94 GEAA: Total DATE: 4/ 9/94 GEAA: start stop duration THE: 07115:00 07:50:00 35 (m) FUDEFTH: 350 319	4.36 3.04 2.84 2.55 1.40 1.08 1.08 0.96 0.82 0.66 0.58 0.34 0.14 0.14 115.14	104 376 80 80 40 40 4 218 16 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 0 9 0 9	32:96 3.78 2.66 2.62 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.22 0.12 0.12 99.85	232 233 MH1 124 5 629
Hoplostethur codenati ExocomitoAE Raja 95. Nematocaccinus africanus Glyphus marsupialis Aritateus veridans, female Balomaurus 35. OPHIDIIDAE BRIGHIDAE ChiorophthalMus stlanticus Aristeus varidens, male Total DATE: 4/ 9/94 GEAR 1 start stop duration. TIME :07:15:00 07:50:00 35 (mi) LOG :0334.10 5395.90 1.40 FDEFTH: 350 319 BUEFTH: 350 319 BUEFTH: 340° Wire out	4.36 3.04 2.84 2.55 1.40 1.08 1.08 0.95 0.66 0.58 0.34 0.14 115.14 115.14	104 376 80 80 40 40 4 218 16 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 0 9 0 9	32:96 3.74 2.64 2.65 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.29 0.12 0.52 99.85	232 233 MH1 124 5 629
Hoplostethur codenati ExocomTioAE Raja 95. Nematocaccinus africanus Glyphus marsupialis Aritateus veridens, female Halomaurus 35. OPHIDIIDAE BRIGHIDAE ChiorophthalMus stlanticus Aristeus varidens, male Total DATE: 4/ 9/94 GENA 1 Statt stop duration TIME 107:15:00 07:80:00 35 (min LOG 15394.10 5395.90 1.40 FUEFTH: 350 319 BUEFTH: 350 319 BUEFTH: 340° Wire out	4.36 3.04 2.84 2.55 1.40 1.08 1.08 0.95 0.66 0.58 0.34 0.14 115.14 115.14	104 376 80 80 40 40 42 218 16 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.74 2.64 2.65 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.29 0.12 0.52 99.85	232 233 WH: 124 : 629 : 1135
Hoplostethur codenati ExocomitoAE Raja 95. Nematocaccinus africanus Glyphus marsupialis Aritateus veridans, female Balomaurus 35. OPHIDIIDAE BRIGHIDAE ChiorophthalMus stlanticus Aristeus varidens, male Total DATE: 4/ 9/94 GEAR 1 start stop duration. TIME :07:15:00 07:50:00 35 (mi) LOG :0334.10 5395.90 1.40 FDEFTH: 350 319 BUEFTH: 350 319 BUEFTH: 340° Wire out	4.36 3.04 2.84 2.55 1.40 1.08 1.06 0.95 0.66 0.58 0.34 0.14 115.14 FYPE: BT No:6 La) Purpose Area cod GearCond Validity V::1080 m Spe h: 231.84 CATCH/5	104 376 80 80 40 40 4 218 16 22 218 16 22 22 2 2 20 20 20 20 20 20 20 20 20 20	32:96 3.74 2.64 2.65 2.22 1.21 0.94 0.92 0.83 0.71 0.57 0.50 0.29 0.12 0.52 99.85	232 233 WH 124 : 629 : 1135
Hoplostethus codenati EXOCORTIONE Raja 90. Nematocaccinus africanus Glyphus marupialis Aristeus veridens, femele Balosaurus 90. OPHIDIINAE DATE: 4/ 9/94 GEAR 7 Statt stop duration Total DATE: 4/ 9/94 GEAR 7 Statt stop duration TimE r0715100 07150:00 35 (m LOG :5394.10 5395.90 1.80 FDETH: 350 319 Towing dir: 340' Wire out Sorted: 57 Kg Total catcl SPECIES Chlocophthelmus atlanticus	4.36 3.04 2.84 2.85 1.40 1.08 1.06 0.95 0.66 0.58 0.34 0.14 115.14 115.14 FYPE: BT No:6 LR) Purpose Area cod GearCond Validity t:1080 m Spe h: 231.84 CATCH/S	104 376 58 40 40 4 2 218 16 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 3.78 2.64 2.64 2.46 2.42 1.21 0.94 0.92 0.83 0.71 0.50 0.29 0.12 0.12 0.12 99.85 ECT STATIC ONILAT S Long I HOUR; S 07 TOT. C 46.76	232 233 WH: 124 629 1135 097.44 SAMP
Hoplostethus codenati EXOCOTIDAE Naja sp. Nematocarcinus africanus Glyphus maruupialis Aristeus veridens, femele Balomaurus sp. OPHIDIIDAE BRIOWIDAE Chiorophthalmus stlanticus Aristeus varidens, male Total DATE: 4/ 9/94 GEAM 7 start stop duration TIME r0715100 07150:00 35 (mi LOG :5394.10 5395.90 1.80 FORTH: 350 319 Towing dir: 340' Wire out Sorted: 57 Kg Total catcl SPECIES Chlorophthalmus stlanticus Merluccius polli Illex coindetii	4.36 3.04 2.84 2.85 1.40 1.08 1.06 0.95 0.66 0.82 0.66 0.58 0.34 0.14 115.14 115.14 FYPE: BT Not6 in) Purpose Area Cod GearCond Validity V::1080 m Spe h: 231.84 CATCH/S vsight s 185.83 94.63 25.65	104 176 376 58 40 40 4 2 218 16 90 26 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.74 3.74 2.66 2.66 2.66 2.61 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.95 0.12 0.12 99.85 BCT STATIC SN Lat 5 Long 1 +10 HOUR; 3 0 46.76 23.81 6.45 0 10 10 10 10 10 10 10 10 10	232 233 WH 124 629 : 1135
Hoplostethus cademati EXOCORTIONE Anja 95. Nematocaccinus africanus Glyphus mersupialis Aristeus veridens, femele Halomaurus 95. OHHIDITANE BRIGHTARE Total DATE: 4/ 9/94 GEAR 7 STORMER Total Total DATE: 4/ 9/94 GEAR 7 Start stop duration TIME :07:15:00 07:80:00 35 (ml LOG :5394:10 5395:90 1.20 FORFTH: 350 319 TOWING dir: 340 Wire out Sorted: 57 Kg Total catch SPECIES Chlorophthelmus atlanticus Merlucclus poli Illex coindetii HACROURIDAE	4.36 3.04 2.84 2.55 1.40 1.08 1.06 0.96 0.82 0.66 0.58 0.34 0.14 115.14 115.14 TYPE: BT Not6 GatCond Validity t:1080 m Spe h: 231.84 CATCH/3 94.63 25.65 24.34	104 176 80 58 40 4 2 218 4 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.26 2.22 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.71 0.57 0.57 0.12 99.85 BCT STATIC ON:Lat 5 Long 1 HOUR: 5 0F TOT. C 46.76 23.96 6.45 6.45 6.12	232 233 WHI 124 629 1135 997.44 SAMP
Hoplostethus codenati EXOCORTIONS Raja sp. Nematocaccinus africanus Glyphus marsupialis Acisteus veridens, femele Balconurus sp. OWHIDIINAS BRICHIDAS Total Total Total DATE: 4/ 9/94 GEAR Total Total Total Total DATE: 4/ 9/94 GEAR Total Total Total Secondation TIME :0715:00 07:50:00 35 (mid LOG :5394:10 5395:90 1.80 FDEFTH: 350 319 BEFTH: 350 319 BEFTH: 350 319 Totalg Cite Star Sorted: 57 Kg Total catch SPECIES Chlocophthelmus atlanticus Merlucclus polli Illex coindetii MACROUNIDAS Synagrope microlepis MiscKLIAMSOUS	4.36 3.04 2.84 2.55 1.40 1.08 1.06 0.52 0.66 0.54 0.34 0.14 115.14 115.14 115.14 rypE: BT No:6 in) Purpose Area cod GasrCond Validicy t:1080 m Spe h: 231.84 cATCH/S veight r 185.83 94.63 25.65 24.34 13.37 12.69	104 176 176 176 176 176 176 177 16 16 16 16 16 16 16 22 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.26 2.22 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.71 0.57 0.57 0.57 0.12 99.85 ECT STATIC ON:Lat 5 Long 1 HOUR: 5 COF TOT. C 46.76 6.12 3.36 5.36 1.37 1	232 233 WHI 124 629 1135 997.44 SAMP
Hoplostethus cademati EXOCORTIONE Anja 95. Nematocarcinus africanus Glyphus mersupialis Aristeus veridens, femele Halomaurus 95. OPHIDIINAE BRIGHIAM DATE: 4/ 9/94 GEMA Total Total Total DATE: 4/ 9/94 GEMA Total Total Total DATE: 4/ 9/94 GEMA Total Total Total Selection of the selection TIME 107:15:00 07:50:00 35 (m) LOG 15394.10 5395.90 1.40 FDEFTH: 350 319 Toring dir: 340° Wire out Sorted: 57 Kg Total catch SPECIES Chlocophthelmus atlanticus Merlucclus polli Illex coindetii MACROUNIDAE Synagrope microlepis MiscEliAnKOUS Ariomme sp.	4.36 3.04 2.84 2.55 1.40 1.08 1.06 0.95 0.66 0.58 0.34 0.14 115.14 115.14 FYPE: BT Not6 in) Purpose Area Cod GearCond Validity CATCH/S Seaton 185.83 94.63 25.65 24.34 13.37	104 176 376 58 40 40 4 2 218 16 90 26 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.66 2.62 2.62 1.78 99 0.94 0.12 99.85 ECT STATIC 0N:Lat 5 Long 1 4.67 0.12	232 233 WHI 124 629 1135 997.44 SAMP
Hoplostethur codenati EXOCORTIONE Raja 95. Nematocarcinus africanus Glyphus marupialis Aristeus veridens, femele Balomaurus 95. OHTDIINAR BRIONIDAR Chlorophthalmus atlanticus Aristeus varidens, male Total DATE: 4/ 9/94 GEAR 7 statt stop duration TIME 07115:00 07:50:00 35 (mi LOG 15394.10 5395.90 1.80 FDEFTH: 350 319 BUEPTH: 350 319 Towing dir: 340° Wire out Sorted: 57 Kg Total catcl SPECIES Chlorophthalmus atlanticus Merluccius polli Iller coindeti: MACROUNIDAE Synagrope microlepis MiscELJANEOUS Ariomma 95. Parapenaeus longirootris, male Parapenaeus longirootris, male	4.36 3.04 2.84 2.55 1.40 1.08 1.06 0.95 0.66 0.58 0.34 0.14 115.14 115.14 FYPE: BT Not6 in) Purposa Area cod GearCond Validity critiblo m Spe h: 231.84 CATCH/S veight r 18,83 94.63 25.65 24.34 13.37 12.69 8.98 7.06 5.14	104 176 376 58 40 40 42 218 16 90 26 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.74 3.74 2.66 2.66 2.66 2.66 2.66 1.21 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.95 0.12	232 233 Wi 124 : 629 : 1135 997.44 SAMP 234
Hoplostethus codenati EXOCORTIONE Raja 39. Nematocarcinus africanus Glyphus maruupialis Aristeus veridens, female Halogaurus 39. OPHIDITAR BRIOWIDAR Chlorophthalmus atlanticus Aristeus varidens, male Total Total DATS: 4/ 9/94 GEAR 7 start stop duration TIME 10715:00 07:50:00 35 (mi LOG :5394.10 5395.90 1.80 FUBETH: 350 319 Towing dir: 340° Wire out Sorted: 57 Kg Total catch SPECIES Chlorophthalmus atlanticus Merluccius polli Ilez coindeti: HUCROUNIDAE Synagrope microlepis MiSCELLANKOUS Ariomes 39. Parapenaeus longirostris, male Parapanaeus longirostris, male	4.36 3.04 2.84 2.55 1.40 1.08 1.06 0.95 0.66 0.58 0.34 0.14 115.14 115.14 115.14 rype: BT Not6 in) Purposa Area cod GearCond validity r:1080 m Spe h: 231.84 cATCH/S veight r 18,83 94.63 25.65 24.34 13.37 12.69 8.98 7.06 5.14 4.80 3.63	104 176 376 58 40 40 4 2 218 16 90 26 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.74 3.74 2.66 2.66 2.66 2.66 2.66 2.62 0.92 0.92 0.93 0.57 0.50 0.57 0.50 0.29 0.12 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	232 233 233 233 233 235
Hoplostethus codenati EXOCORTIONE Anja 95. Nematocarcinus africanus Glyphus mersupialis Aristeus veridens, femele Halomaurus 95. OPHIDIINAE BRIGHIAA Aristeus varidens, male Total Total Total DATE: 4/ 9/94 GEAR Total Total Total Total DATE: 4/ 9/94 GEAR Total Total Total Second State stop duration TIME: r07115:00 07:50:00 35 (mai LOG r5394.10 5395.90 1.80 PDETTH: 350 319 BUEFTH: 350 319 BUEFTH: 350 319 Totang dir: 340° Wire out Sorted: 57 Kg Total catch SPECIES Chlocophthalmus atlanticus Merluccius polii Illex coindetii HACADURINES Synagrope microlepis MiscKLIANEOUS Ariomme 35. Parageneeus longirootris, male Parageneeus longirootris, fem.	4.36 3.04 2.84 2.84 2.55 1.40 1.08 1.06 0.82 0.36 0.34 0.14 0.14 115.14 115.14 115.14 FYPE: BT No:6 6 10, 5 115.14 115.14 CATCH/S veight 5 185.83 9.65 24.34 13.37 12.69 8.98 7.06 5.14 4.80 3.63 3.02	104 176 376 80 58 40 4 2 218 40 4 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.22 0.94 0.71 0.12 99.85 ECT STATIC ONISET STATIC	232 233 W1: 124 : 629 : 1135 N97.44 SAMP 234 235
Hoplostethus cademati EXOCORTIONE Raja sp. Nematocarcinus africanus Glyphus marsupialis Aristeus veridens, femele Halogaurus sp. OPHIDIIAE BRLOWIDAE DATE: 4/ 9/94 GEAN T State stop duration Total Total Total Total DATE: 4/ 9/94 GEAN T State stop duration TIME :07115:00 07:50:00 35 (mi LOG :0394:10 5395:90 1.80 FDEFTH: 350 139 BUEFTH: 350 319 BUEFTH: 350 319 Towing dir: 340° Wire out Sorted: 57 Kg Total catch SPECIES Chlorophthalmus stlanticus Herlucclus polli Illex coindetii HSCKLIANEOUS Ariomme sp. Farapaneus longirostris, fam. Fterothrismis bellovi Trichurus lepturus BOMOLIONE	4.36 3.04 2.84 2.84 1.08 1.08 0.96 0.82 0.66 0.58 0.34 0.14 0.14 115.14 115.14 115.14 115.14 115.14 CATCH/S weight 5 185.83 94.63 25.65 24.33 13.37 12.69 8.98 7.06 5.14 4.80 3.63 2.13 1.71	104 104 176 176 176 176 176 176 176 16 16 16 16 16 16 16 16 16 22 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.22 0.94 0.71 0.12 99.85 BECT STATI(ONI:Lat \$ Long 1 0.40 0.12 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	232 233 233 233 233 235
Hoplostethus cademati EXOCORTIONS Naja 95. Nematocarcinus africanus Glyphus mersupialis Aristeus veridens, femele Halomaurus 35. OPHIDIIAS BRIGHIDAS DATE: 4/ 9/94 GEAN : Total Total Total Total Total Total Total Total DATE: 4/ 9/94 GEAN : Start stop duration The rorlision 07:50:00 35 (million HoperTH: 350 319 1.30 Towing dir: 340° Vire out Sorted: 57 Kg Total catch SPECIES Chlocophthalmus atlanticus Herluccius polli Illex coindetii HOCAOURIDAS Synsgrope microlepis MiscElianEOUS Ariomme 35. Facepenaeus longirostris, male Perepenaeus longirostris, fem. Fierthirus lepturus BOMOLIDAE LOPHIDAE	4.36 3.04 2.84 2.84 2.55 1.40 1.08 1.08 0.82 0.36 0.58 0.34 0.14 115.14 115.14 115.14 115.14 115.14 115.14 CATCH/S veight 5 185.83 94.63 25.65 24.34 13.37 12.69 8.98 7.06 5.14 4.80 3.63 2.13 1.51	104 104 176 176 176 176 176 176 176 16 16 16 16 16 16 16 16 16 22 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.22 0.94 0.71 0.12 99.85 BECT STATI(ONI:Lat \$ 2.46 2.46 2.22 0.94 0.12 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	232 233 W1: 124 : 629 : 1135 N97.44 SAMP 234 235
Hoplostethur codenati EXOCORTIONE Raja sp. Nematocarcinus africanus Glyphus marupialis Aristeus veridens, femele Balogarus sp. OHIDIINAK BHIOHIDAK DATE: 4/ 9/94 GEAR 7 statt stop duration TIME 07115:00 07:50:00 35 (mi LOG 15394.10 5395.90 1.40 FUBETH: 350 319 TOWING dir: 340° Wire out Sorted: 57 Kg Total catch SPECIES Chlocophthalmus atlanticus Marlucclus poli Iller coindetii MACROURIDAE Synagrops microlepis MiSCALLANEOUS Ariomes sp. Parapenaeus longirostris, male Parapenaeus longirostris, male	4.36 3.04 2.84 2.84 2.55 1.40 1.08 0.96 0.82 0.66 0.58 0.34 0.14 0.14 115.14 115.14 115.14 115.14 115.14 115.14 115.14 CATCH/2 veight 5 18,83 94,63 24,34 13.37 12.69 8.98 7.06 5.14 4.80 3.63 2.13 1.51 1.44 0.07	104 176 376 58 40 42 218 16 90 26 22 2 20 20 PROJ POSITI code: 3 4 : 1 1.code: 1 1.code: 1 code: 1 code: 1 225 512 512 515 487 515 583 211 77 7 215 543 225 543 225 543 225 543 225 543 225 543 225 543 225 543 225 543 225 545 545 545 545 545 545 545	32:96 3.78 3.78 2.66 2.22 0.94 0.71 0.12 0.12 99.85 BET STATIC ONILAT 5 Long 1 0.10 HOUR: 5 0.10 10 HOUR: 5 0.12	232 233 W1: 124 : 629 : 1135 N97.44 SAMP 234 235
Hoplostethus cadenati Exocostitus africanus Glyphus marsupialis Aristeus veridans, feměle Halosaurus sp. OHIDIIDAE BRIONIDAE Total DATŘI 4/ 9/94 GEAR Total Total Total Total Total Total Total Total Total Chirophthalmus atlanticus Hopfrit: 350 319 1.20 FDSFTH: 350 319 Toving dir: 340° Vire out Sorted: 57 Kg Total catcl SPECIES Chicophthalmus atlanticus Herluccius polli Illar coindetii HACROUNIDAE Synagrope microlepis HiscElaveous longirostris, male Parapenasus longirostris, fem. Flerothirus lepturus Bomoli DAE LOPHICOLEFIDAE SpiceJDAE	4.36 3.04 2.84 2.84 2.55 1.40 1.08 1.08 0.82 0.36 0.58 0.34 0.14 115.14 115.14 115.14 115.14 115.14 115.14 CATCH/S veight 5 185.83 94.63 25.65 24.34 13.37 12.69 8.98 7.06 5.14 4.80 3.63 2.13 1.51	104 104 176 80 58 40 4 2 218 40 4 2 2 2 2 2 2 2 2 2 2 2 2 2	32:96 3.78 2.66 2.22 0.94 0.71 0.12 99.85 BECT STATI(ONI:Lat \$ 2.46 2.46 2.22 0.94 0.12 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	232 233 W1 124 :: 629 : 1135 197.44 SAMP 234 235

DATE: 4/ 9/94 GEAR TYL start stop duration			TION:Lat Long	S Z 1
TIME :09:35:00 10:05:00 30 (min)		e code:		ь I
LOG 15403.70 5405.20 1.50	Acea C			
FDEPTH: 210 220		nd.code:	-	
BDEPTH: 210 220		ty code:	1	
Towing dir: 160° Wire out:				
Sorted: 61 Kg Total catch:	356.6	3 CATO	H/HOURI	713.
SPECIES	CATCH	/HOUR	N OF TOT.	c s
	weight	ກມະພິດສະເສ		
Synagrous microlepis	227.14	7986	31.\$5	
HYCTOPHIDAE	214.50	138908	30.07	
Trichiurus lepturus	92.40	352	12.95	
Brotula berbata	51.32	22	7,20	
Denter angolensis	36.30	98	5.09	
Chlorophthalaus atlanticus	22.44	780	3.15	
Zeus faber	14.30	76		
Illex coindetii	10.34	274	1,45	
Spicara alta	9,78	52	1.37	
Uranoscopus polli	8.36	32	1.17	
Chelidonichthys gabonensis	7,54	32	1.06	
Grazmoplites gruveli	5.60	22	0.79	
Pterothrissus belloci	5.30	10	0.75	
Peristedion cataphractum	4.94	44 384	0,69	
Parapanaaus longirostris MACROURIDAE	0.76	344	0.20	
NACROURIDAE Scombergmorus tritor	0.54	10	0.08	
Citharus linguatula	0.22	10	0.03	
Total	713.32		100.01	

		PRO	ECT STATIC	XN: 126
DATE: 4/ 9/94 GEAR TY	E: BT Note	POSITI	OhiLat S	5 631
start stop duration			Long 1	1147
	Purpose	code: 3		
LOG 15412.50 5414.10 1.60	Area coo			
	GearCond			
BDEPTH: 122 110		code: 1		
Towing dir: 100° Wire out:	360 m 5pe	ed; 32 K7	• 10	
Sorted: 100 Kg Total catch:	100.83	CATCH	HOURI	183.33
SPBCIES	CATCH/I	IOUR 1	OF TOT. C	SAMP
	weight :	umbers		
Selene dorsalis	154.00	409	\$4.00	239
Trachurus treças	24.36	44	13.29	238
Trichiurus lepturus	3.18	5	1.73	
Iller coindetii	0.35		0,19	
Zenopsis conchifer	0.07	2	0.04	
VANADATA CONCISTVAT	0.07	-		
Total	111.96		99.25	

			JECT STATIO	
	TYPE: BT No:		IONILAT STAILO	
	TPEL DI NO.	10 10311	Long E	
	ni Purpos	code: 3		1403
	Area C			
LOG :5429.60 5431.10 1.50 FDEPTE: 72 68		nd-codes	•	
BDKPTH: 72 68		ty code: 1		
	: 240 m \$			
-				
Sorted: 122 Kg Tot#1 catch	352.0	CATCH	i/HOURI 7	04.00
SPECIES	CATCH.	HOUR I	of tot. c	SAMP
	weight	numbers		
Selene dorzalia	246,68	632	35.04	244
Alloteuthis africana	124.58	52820	17.70	
Trichiurus lepturus	36,46	34	5.24	
Spinephelus seneus	30.50	6	4.33	247
Argyrosomus hololepidotus	26.52	12	3.77	246
Trachurus trecae	25,70	264	3.65	240
Branchiostegus semifesciatus	22,94	56	3.26	
Umbrina canariensis	22.84	56	3.24	
Dentex canariensis	20.24	22	2.88	
Décapterus rhonchus	18.04	16	2.56	
Sepia officinalis hierredda	17.60	20	2.50	
Dentex congoensis	17.12	182	2.43	242
Boops boops	15.36	676	2.18	
Sparus auriga	14.04	12	1.99	
Pagellus bellottii	12.22	94	1.74	243
Brotula barbata	11.06	12	1.57	
Sparus caeruleostictus	9.90	6	1.41	245
Dentex angolensis	9.02	44	1.2*	241
Chloroscombrus chrysurus	4.68	24	0.66	
Sphyraena guachancho	4.40	12	0.63	
Chastodon hosfleri	3.42	22	0.49	
Raja miraletus	3.36	6	0.40	
Scomber japonicus	2.70	12	0.30	
Zeus faber	1.54	6	0.22	
Fistularia petimba	1.38	6	0.20	
Scorpsena stephanica	0.78	6	0,11	
Chastodon mercellas	0.40	12	0.06	
Todaropsis eblanae	0.12	6	0,02	
Total	704.00		100.02	

DATE: 4/ 9/94 GEAR	TYPE: BT Noi6	PRO	JECT STATI	ON: 128 5 627
start stop duration TIME :15:10:00 15:40:00 30 (m			Long	R 1206
LOG 15435.80 5437.30 1.50	Area cod	1		
FDAPTH: 47 46 BDAPTH: 47 46	GearCond Validity	code: 1		
Towing dirt 160° Wire ou	ti 150 m Spe	ndı 30 k	n*10	
Sorted: 146 Kg Total catc	hı 409,52	CATCH	/HOUR:	819.04
SPECIES	CATCH/H	א מואר	or tot. c	SAMP
	weight n	undoers		
Decapterus rhonchus Pageilus bellottii	648.40 52.92	560 392	79.17	249 250
Trachurus trecae Sepia officinalis hierredda	43.64 29.08	90 84	5.33 3.55	24\$
Trichiurus lepturus Sparus caeruleostictus	24.92 7.34	22 6	3.04	
Zeus fäher	6.34	6	0.77	
Sphyrmana guachancho Fistularia petimba	4.41	6 12	0.55	
Total	\$19.04		100.00	
DATE: 4/ 9/94 GEAR	TYPE: BT No:6	PRO POSIT	JECT STATI ION:Lat	ON: 129 \$ 632
start stop duration TIME :17:50:00 1\$:20:00 30 (m	in) Purpose	code: 3	Long	E 1218
LOG 15455.50 5456.90 1.40 FDEPTH: 23 24	Area cod GearCond	e ; 1		
BDEPTH: 23 24	Validity	code: 1		
Towing dir: 336" Wire out				
Sorted: 63 Kg Total catc	hı 639.10	CATCH	HOUR: 1	278.20
SPECIES	CATCH/H		OF TOT. C	SAMP
Brachydeuterus auritus		umbers 3460	57.03	252
Galeoides decadectylus Fseudotolithus typus	195.00 76.00	800 60	15.26	251
Trichiurus lepturus	71.00	600	5.55	
Pagellus bellottii Trachurus trecae	68.20 35.60	380 1160	5,34 2,79	253 255
Ilisha africana Sepia zp.	33.60 33.00	520 40	2.63	254
Boops boops	9.00	480	0.70	
Sphyrsena sphyrsena Citharus linguatula	7.60	20 60	0.59	
Decapterus rhonchus Selene dormalis	6.20 5.00	60 100	0.49 0.39	
Trachinus armatus	4.00	140	0.38	
Total	1280.20		100.17	
		584	JECT STATI	ON. 130
	TYPE: BT No:6		ION:Lat	5 640
	in) Purpose	codes 3	Long	g 1221
LOG 15477.40 5478.70 1.30 FDEPTH1 20 21	Area cod GearCond	. code :		
BDEPTH: 20 21 Towing dir: 340° Wire out	Validity t: 100 m Spec	code: 1 d: 27 k	n*10	
Towing dir: 340° Wire out	t: 100 m Spec	id: 27 k		341.28
Towing dir: 340° Wire ou Sorted: 102 Kg Total cato	t: 100 m Spec	id: 27 k		341.28
Towing dir: 340° Wire out	L: 100 m Spec h: 170.64 CATCH/H	d: 27 k CATCH		
Towing dir: 340° Wire ou Sorted: 102 Kg Total cato SPBCIKS Pagallus bellottii	t: 100 m Spec h: 170.64 CATCH/HP weight m 90.36	Id: 27 k CATCH DUR 1 Lumbers 284	/HOUR: OF TOT. C 26.48	SAMP 256
Towing dir: 340° Wire ou Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex canatiensis Sepia sp.	t: 100 m Spec h: 170.64 CATCH/H weight m 90.36 84.52 38.92	Ed: 27 k CATCH OUR 1 UNDER5 284 265 46	/HOUR: OF TOT. C 26.48 24.77 11.40	5AMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIKS Pagellus bellottii Dentex Canariensis Septa sp. Sparus cseculeostictus Trachurus treccae	t: 100 m Spec h: 170.64 CATCH/# woight m 90.36 64.52 38.92 31.08 13.80	DUR 1 CATCH DUR 1 LUNDER5 284 261	/HOUR: OF TOT. C 26.48 24.77	SAMP 256
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex canariensis Sepie sp. Sparus cseculeostictus Trachurus trecca Bpinephelus alexandrinus *	t: 100 m Spec h: 170.64 CATCH/H weight m 90.36 84.52 38.92 31.08 13.80 12.20	Id: 27 k CATCH OUR 1 284 265 46 116	/HOUR: OF TOT. C 26.48 24.77 11.40 9.11 4.04 3.57	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus beliottii Dentex canarismis Sepia sp. Sperus casculeostictus Trachurus trecas Epinephenus alexandrinus * Bodienus speciosus Flactorinchus mediterreneus	t: 100 m Spec h: 170.64 CATCH/H woight m 90.36 64.52 38.92 31.08 13.80 12.20 11.54 9.52	Id: 27 k CATCH OUR 8 LINDETS 284 265 46 116 90 6 4 16	/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.04 3.57 3.38 2.79	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex Canariensis Seplary cseruleostictus Trachurus trecca Byinsphelus alexandrinus * Bodianus speciosus Pisctorinchus maditerraneus Pisctorinchus maditerraneus Piscuopensis Boore boore	t: 100 m Spec CATCH/H veight m 90.36 44.52 38.92 31.08 13.80 12.20 11.54 9.52 7.96 6.36	Ed: 27 k CATCH DUR 8 URDETS 284 265 46 116 90 6 4 16 76 414	/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.04 3.57 3.38 2.79 2.33 1.86	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pegallus ballottii Dentex canariensis Sepla ap. Sparus casculeostictus Trachurus trecae Epinephelus alexandrinus ° Bodienus apeciosus Flectorinchus mediterreneus Fseudupensus przyensis Boops boops Sphyreena sphyraena Famulirus ap.	<pre>t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 31.00 13.80 12.20 11.54 9.52 7.96 6.36 6.36 6.36 4.61</pre>	Id: 27 k CATCH UNDERS 284 265 46 116 90 6 4 16 76	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.04 3.57 3.38 2.79 2.33 1.86 1.86 1.37</pre>	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pegallus ballottii Dentex conariensis Sepia sp. Sparus casruleostictus Irachurus trecae Epinephelus alexandrinus * Bodianus speciosus Flactorinchus mediterraneus Fseudupanaus prayansis Boops boops Sphytaena sphytaena Famulitus sp. Loligo sp. Ballstes capriscus	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 31.08 13.80 12.20 11.54 9.52 7.96 6.36 6.36 6.36 4.68 4.42 3.32	d: 27 k CATCH UNDETS 284 46 116 490 90 90 90 90 90 90 90 90 90 90 16 4 4 4 16 4 16 4 30	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.04 3.57 3.38 2.79 2.33 1.86 1.86 1.37 1.30 0.57</pre>	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex Canariensis Septa sp. Sparus cseculeostictus Trachurus treccae Bpinephelus alexandrinus * Bodianus speciosus Fiscudupenaus prayensis Boops boops Sphytaena sphyraena Famulirus sp. Loligo sp. Bellstes caprisous Fistuleira petimba	t: 100 m Spec h: 170.64 CATCH/H weight m 90.36 84.52 38.92 31.00 12.20 11.54 9.52 7.96 6.36 6.36 4.64 4.62 3.32 2.84	nd: 27 k CATCH DUR 1 Lumbers 284 265 46 4116 76 76 414 16 4 4 30 10	/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.04 3.57 3.38 2.79 2.33 1.86 1.66 1.67 1.30 0.87 0.83	5AMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex Canariensis Seple sp. Sparus cseculeostictus Trachurus treccas Bpinephelus alexandrinus * Bodianus speciosus Flactorinchus maditerraneus Pseudupeneus przyensis Bodops boops Sphytaena sphyraena Panulirus sp. Loligo sp. Bellstes caprisous Fistulei patimba Trichiurus lepturus Galesides decadartylus	t: 100 m Spec h: 170.64 CATCH/H weight m 90.36 84.52 38.92 31.00 12.20 11.54 9.52 7.96 6.36 6.36 6.36 4.61 4.61 4.2 3.32 2.64 2.52 2.44	nd: 27 k CATCH UNR 8 Umbers 284 268 46 116 90 6 4 16 76 416 16 16 96 4 16 16 90 6 4 16 10 6	/HOUR: OF TOT. C 26.48 24.77 11.40 9.11 4.00 4.00 1.30 0.97 1.30 0.97 0.83 0.74 0.74	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex Canariensis Seple sp. Sparus cseculeostictus Trachurus treccas Bpinsphelus alexandrinus * Bodianus speciosus Flactorhinchus maditerransus Fsaudupenaus przyensis Boops boops Sphyraena sphyraena Panulirus sp. Loligo sp. Bellstes caprisous Fistuleis patimba Trichurus lepturus Galesides decadattylus Chaetodon hosfleri Scorpeans stephanica	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 84.52 38.92 31.00 12.20 11.54 9.52 7.96 6.36 6.36 6.36 6.36 4.61 4.42 2.82 2.84 2.52 2.44 2.21	nd: 27 k CATCH DUR L Lumbers 284 263 46 116 4 4 16 4 4 16 4 30 10 6 4 30 10 6 4 30 20	/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 9.13 1.30 1.30 1.36 1.37 1.30 0.57 0.87 0.87 0.87 0.67 0.64	SAMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagellus bellottii Dentex Canariensis Seple sp. Sparus cseruleostictus Trachurus treccas Bpinephelus alexandrinus * Bodianus speciosus Flactorinchus maditerraneus Fseudupenaus przyensis Boops boops Sphyraena sphyreena Fseudupenaus przyensis Boops boops Sphyraena sphyreena Fseudupenaus przyensis Boops boops Sphyraena sphyreena Fseudupenaus przyensis Boops decadatylus Chałcos decadatylus Chałcodon hosfiari Scorpeana stephanica Cephalopholis taeniops Uranoscous poli	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 31.08 13.80 12.20 11.54 9.55 6.36 6.36 6.36 6.36 4.60 4.42 2.84 2.52 2.44 2.52	nd: 27 k CATCH UNR % UNBers 284 268 46 116 90 6 4 16 4 16 16 4 16 16 4 30 10 0 6 4 4 30 10 0 6 4 4 30 10 0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0	/HOUR: OF TOT. C 26.40 24.77 11.40 3.11 4.04 3.57 3.38 2.79 2.79 2.79 3.33 1.30 0.97 0.83 0.71 0.67	5AMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus bellottii Dentex canariansis Sepia sp. Sparus casculeostictus Trachurus treccas Epinephelus alexandrinus * Dodianus speciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus apeliterraneus Fisudupandus peciosus Fisudupandus peciosus Plactates capriscus Fistularia petimba Tricchiurus lepturus Gelaeides decadactylus Chaetodon hoeflari Scorpeana stephanica Cephalopholis tamiops Uranoscopus polli BortHIAE	<pre>t; 100 m Spec h: 170.64</pre>	nd: 27 k CATCH UMBORTS 284 284 284 284 284 46 116 116 4 16 4 16 4 16 4 30 10 10 10 16 4 4 4 30 20 4 4 4 4 4	<pre>/HoUR: OF TOT. C 26.40 24.77 11.40 3.51 4.04 3.57 3.38 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79</pre>	5AMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus bellottii Dentex canatiensis Septe sp. Sparus cseculeostictus Trachurus tracas Epinephelus alexandrinus * Bodianus speciosus Fisculorinchus mediterraneus Fiscularia speciosus Sphytzens aphytzens Famulirus ap. Loligo sp. Bellstes capriscus Fitchierus lepturus Galesides decadattylus Chestodon hoeflari Scorpaena stephanica Cephalopholis teniops Uranoccous polii BothiAE	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 38.92 31.08 12.20 11.54 9.52 7.96 6.36 6.36 6.36 6.36 6.36 4.61 4.42 2.84 2.52 2.44 2.52 2.44 2.52 2.44 1.62 1.38 0.70 0.48	nd: 27 k CATCH UNBETS 284 263 46 116 76 76 4 16 76 76 4 14 16 4 30 10 6 4 30 10 6 4 4 30 20 4 4	<pre>/HoUR: OF TOT. C 26.40 24.77 11.40 3.11 4.04 3.57 3.38 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79</pre>	5AMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus bellottii Dentex canariansis Sepia sp. Sparus casculeostictus Trachurus treccas Epinephelus alexandrinus * Dodianus speciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus mediterraneus Fisudupandus peciosus Plactorhinchus apeliterraneus Fisudupandus peciosus Fisudupandus peciosus Plactates capriscus Fistularia petimba Tricchiurus lepturus Gelaeides decadactylus Chaetodon hoeflari Scorpeana stephanica Cephalopholis tamiops Uranoscopus polli BortHIAE	<pre>t; 100 m Spec h: 170.64</pre>	nd: 27 k CATCH UMBORTS 284 284 284 284 284 46 116 116 4 16 4 16 4 16 4 30 10 10 10 16 4 4 4 30 20 4 4 4 4 4	<pre>/HoUR: OF TOT. C 26.40 24.77 11.40 3.51 4.04 3.57 3.38 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79</pre>	5AMP 256 257
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus bellottii Pentex canatianias Septe sp. Sparus cesculeostictus Trachurus trecces Epinephelus alexandrinus * bodianus speciosus Plactorhinchus mediterraneus Fiseudupaneus prezyensis Boops boops Sphytzens sphytzens Famulirus sp. Loligo sp. Bellstes capriscus Fitchiurus lepturus Gelesides decadatylus Chestodon hoefleri Scorpeana stephanica Cephalopholis teniops Uranoscopus polii Bohinge Spile	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 31.08 13.80 12.20 11.54 9.55 7.96 6.36 6.36 6.36 6.36 4.62 4.62 2.64 2.52 2.44 2.52 2.44 2.52 2.44 2.52 2.44 3.32 2.44 3.52 2.44 3.52 2.44 3.52 2.44 3.52 2.44 3.52 2.44 3.52 3.43 2.55 2.44 3.52 3.43 2.55 2.44 3.52 3.43 2.55 2.44 3.52 3.43 2.55 2.44 3.52 3.43 2.55 2.44 3.52 3.55 3.43 3.55 3.55 3.55 3.55 3.55 3.55	ed: 27 k CATCH UUR % 284 268 46 116 90 90 6 4 16 4 16 4 16 4 30 10 6 4 4 30 10 6 4 4 4 30 20 4 4 4 4 4 5 20 5 20 8 4 5 20 8 20 8 20 8 20 8 20 8 20 8 20 8 20	/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.04 3.38 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.79 2.47 3.38 2.79 2.79 2.47 3.38 2.79 2.47 4.04 4.04 3.58 2.79 2.	SAMP 256 257 250
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus bellottii Dentex canatiennis Septe sp. Sparus cesculeostictus Trachurus tracce Bpinghelus alexandrinus * Bodianus opaciosus Flactorinchus maditerraneus Fiscudinchus aditerraneus Fiscudinchus aditerraneus Fiscudirus op. Loligo sp. Bellstes capriscus Fitchiuleria petimbe Trichiurus lepturus Gelaoides decadattylus Chettodn hoefleri Scorpaten stephanics Cophalopholis teeniops Uranoscopus polii Bothits 5/ 9/94 GEAN	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 38.92 31.08 12.20 11.54 9.52 7.96 6.36 6.36 6.36 6.36 4.62 4.62 4.62 2.84 2.52 2.44 2.52 2.44 2.52 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.42 3.41 2.52 2.44 3.42 3.41 2.52 2.44 3.42 3.41 2.52 2.44 3.42 3.41 2.52 2.44 3.42 3.41 2.52 2.44 3.42 3.41 2.52 2.44 3.42 3.41 2.52 2.44 3.42 3.41 3.42 3.41 3.42 3.4	ed: 27 k CATCH DUR % Lambers 284 46 116 90 90 90 90 90 90 90 90 90 90 90 90 90	/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.13 2.33 2.33 1.96 1.30 0.97 1.30 0.97 1.30 0.97 1.30 0.97 0.44 0.47 0.47 0.47 0.47 0.47 0.47 0.57 0.10 0.14 0.57 0.21 0.14 0.57 0.21 0.57 0.	SAMP 256 257 259 0N: 131 5 664
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus ballottii Dentex canationsis Sepia sp. Spanu casculoostictus Trachurus treccas Bodianus speciosus Flactorinchus maditerraneus Fiscudarius sp. Loligo sp. Ballstes capriscus Fitchius lapturus Galacides decadatylus Chaetdon hoefleri Scorpaina stephanica Cephalopholis temiops Uranoscopus polii Bortinis Epinephelus goreensis Total DATE: 5/ 9/94 GEAR Start stop duration THMS :09:22:00 09:52:00 30 (s)	t: 100 m Spec h: 170.64 CATCH/H veight m 90.36 44.52 33.92 31.01 13.80 12.20 11.54 9.52 7.96 6.36 6.36 6.36 4.61 4.42 2.84 2.52 2.44 2.52 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.32 2.44 3.42 3.44 3.42 3.44 3.42 3.44 3.	ed: 27 k CATCH OUR % Labers 284 265 264 46 46 166 46 16 76 416 76 416 4 30 10 6 4 30 10 6 4 4 30 10 6 4 4 30 10 6 4 30 10 8 7 8 4 9 8 7 8 4 9 8 7 8 4 9 8 7 8 4 9 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 9.11 4.140 3.13 2.33 1.86 1.96 1.30 0.97 1.30 0.97 1.30 0.97 0.67 0.67 0.67 0.67 0.67 0.67 0.21 0.14 1.99.99</pre>	SAMP 256 257 258
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus ballottii Dentex canatiensis Sepia ap. Sparus casculeostictus Trachurus trecae Epinephelus alexandrinus ° Bodianus apeciosus Flectorinchus mediterransus Fseudupensus przyansis Bodys boops Sphytene sphyraena Faculitus gr. balistes capriscus Fitchularia patimbe Ticchirus lepturus Salasides decadactylus Chaetodon hoeflari Scoppaine stephenica Caphalopholis teniops Uranoscopus poli DATE: 5/ 9/94 GEAR start stop duration TIKE sol 2015200 30 (m LOG :5501.70 5503.30 1.50 FUNTH: 59 56	ti 100 m Sper h: 170.64 CATCH/H veight m 90.36 31.08 13.80 12.20 11.54 13.80 12.20 11.54 13.80 12.20 12.20 6.36 6.36 6.36 6.36 6.36 4.61 4.42 2.84 2.52 2.44 2.52 2.44 2.52 2.44 3.32 2.44 3.32 341.28 77PE: BT No:6 6 50 second 6 second 8 s	ed: 27 k CATCH OUR % Labers 204 265 264 265 46 46 116 90 6 4 16 76 4 16 76 4 16 76 4 30 10 6 4 30 10 6 4 4 30 10 6 4 4 4 4 30 20 4 4 5 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	/HOUR: OF TOT. C 26.40 24.77 11.40 3.11 4.13 2.33 2.33 2.33 2.33 1.46 1.30 0.91 1.30 0.93 1.30 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.95 0.21 0.14 0.95 0.21 0.14 0.95 0.21 0.14 0.95 0.21 0.14 0.95 0.95 0.21 0.14 0.95 0.	SAMP 256 257 259 0N: 131 5 644
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Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus beliottii Dentex canariensis Septa sp. Sparus caeculeostictus Trachurus treccae Epinephelus alexandrinus * Bodianus speciosus Plactorhinchus mediterraneus Pseudupendus prayensis Boops boops Sphytaens sphyraena Fanulicus apticus Cabledon hosfleri Scorpaens stephanica Caphalopholis tamiops Urahozcopus polli Bother de Start stop duration TIME 109:22:00 09:52:00 30 (m TIME 105:22:00 09:52:00 30 (m TIME 105:22:00 09:52:00 30 (m TIME 105:22:00 09:52:00 30 (m TIME 105:50:170 5503:30 1.50 FORTH: 59 56 DETEN: 59 56 DETEN: 59 56 Towing dir: 340° Wire our Sorted: 75 Kg Total cato SPECIES Dentex barnardi Pagalus beliottii Epinephelus aensus Sparus pagus africanus Loligo sp. Maja miraletus Dentex camainais Dentex camai	<pre>ti 100 m Spet h: 170.64 CATCH/H veight m 90.36 4.52 38.92 31.00 12.20 13.80 12.20 13.80 12.20 13.80 12.20 13.80 12.20 6.36 6.36 4.42 2.52 2.44 2.52 2.44 2.52 2.44 2.52 1.16 1.62 341.28 TYPE: BT No:6 6 SearCond Validity t: 200 m Spet h: 150.22 CATCH/H veight m 121.80 88.20 5.16 4.04 5.30 5.36 5.36 5.36 4.42 2.52 1.18 1.62 5.21 8.20 5.36 5.36 5.36 5.36 5.36 5.36 5.36 5.36</pre>	ed: 27 k CATCH OUR & Lumbers 284 265 46 116 90 90 90 90 90 90 90 90 90 90 90 90 90	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 3.13 2.33 1.06 1.37 1.30 0.67 0.67 0.61 0.71 0.61 0.71 0.61 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.7</pre>	SAMP 256 257 258 300. 41 300. 41 SAMP 259
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus beliottii Dentex canariensis Septa sp. Sparus caeculeostictus Trachurus treccae Epinephelus alexandrinus * Bodianus speciosus Plactorhinchus mediterransus Pseudupendus prayensis Boops boops Sphytaens sphyraena Fahulirus ap. Delle ap. Belistes capriscus Tristularis petibe Tristularis petibe Epinephelus goteensis Total DATE: 5/ 9/94 GEAR Start stop duration TIMS :09:22:00 09:52:00 J0 (m PARTH: 59 56 DEFETH: 50 56 DEFETH	<pre>ti 100 m Sper ti 170.64 CATCH/H veight m 90.36 4.52 38.92 31.08 13.80 12.20 13.80 12.20 13.80 12.20 13.80 12.20 13.80 12.20 13.80 12.20 13.80 12.20 13.80 13.80 13.80 13.80 13.80 13.80 13.80 13.80 14.80 15.1 150.22 CATCH/H veight m 121.80 88.20 10.80 5.116 4.04 3.60 5.80 5.116 4.04 3.60 5.80 5.116 4.04 1.60 1.60 2.80 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 2.80 1.60 1.22 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84</pre>	ed: 27 k CATCH OUR & Lumbers 284 46 116 90 90 90 90 90 90 90 90 90 90 90 90 90	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 3.47 2.33 1.06 1.37 1.30 0.97 1.30 0.97 1.30 0.97 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.8</pre>	SAMP 256 257 258 300. 131 5 644 E 1212 300. 44 SAMP 259
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus beliottii Dentex canatiansis Septe sp. Sparus cseculeostictus Trachurus speciosus primebrius alexandrinus * Dodianus speciosus Sphorphelus alexandrinus * Dodianus speciosus Sphyteens sphytaena Faculitus sp. Loligo sp. Belistes capriscus Fitchileria petimbe Trichiurus lepturus Galesides decadattylus Chestodon hosflari Scorpaena stephanica Cephalopholis teniope Urahoscopus poli Bothinde Ephnephelus goreensis Total DATE: 5/ 9/94 GEAN Start stop duration THMS :09:22:00 09:52:00 30 (m LOG :5501.70 5503.30 1.50 FDEFTH: 59 56 DENTH: 59 56 DENTH: 59 56 Towing dir: 340° Wire our Sorted: 75 Kg Total cato SPECIES Dentex barnardi Pagallus beliottii Ephnephelus senius Sparus Paytus Scifeonus Loligo sp. Maja micaletus Bentex cangolamis Bentex cangolamis Bentex cangolamis Entex cangelanis	t: 100 m Sper h: 170.64 CATCH/H veight m 90.36 4.52 38.92 31.08 12.20 12.20 12.20 6.36 6.36 6.36 4.62 4.62 4.62 2.64 2.52 2.44 2.52 2.44 2.52 2.44 2.52 2.44 3.32 2.44 2.52 2.44 3.128 TYPE: BT No:6 in) Purpose Area cod GearCond Validiry t: 200 m Sper h: 150.22 CATCH/H veight m 121.00 88.20 41.00 8.60 5.16 4.00 2.40 2.40 2.40 1.28 0.78 0.98	ed: 27 k CATCH OUR & Labers 284 265 264 266 46 116 90 90 6 4 4 30 10 6 4 4 30 10 6 4 4 30 10 6 4 4 4 4 4 4 4 4 4 4 5 5 5 7 7 8 8 8 4 4 8 8 8 4 8 8 8 8 8 8 8 8 8	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 5.11 4.04 3.57 3.38 2.79 2.33 1.43 2.33 1.43 2.79 2.33 1.43 2.73 1.30 0.57 0.57 0.57 0.57 0.57 0.57 0.57 0.5</pre>	SAMP 256 257 258 300.44 SAMP 259
Towing dir: 340° Wire out Sorted: 102 Kg Total cato SPECIES Pagallus bellottii Dentex canatiensis Septe sp. Sparus cseculeostictus Trachurus speciosus physical speciosus physica	t: 100 m Sper h: 170.64 CATCH/H veight m 90.36 4.52 38.92 31.08 13.80 12.20 13.80 12.20 13.80 12.20 13.80 12.20 1.54 9.52 7.96 6.36 6.36 6.36 4.62 4.62 4.62 2.64 2.62 2.64 2.62 2.64 2.62 2.64 2.62 3.1.28 7.96 6.36 6.36 6.36 6.36 6.36 6.36 6.36 6	ed: 27 k CATCH OUR & Labers 284 265 46 116 90 90 6 4 4 4 30 10 6 4 4 30 10 6 4 4 4 30 10 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 5 8 8 8 1172 1276 8 8 4 8 4 8 4 8 4 8 4 8 4 8 4 8 4 8 4	<pre>/HOUR: OF TOT. C 26.40 24.77 11.40 5.11 4.04 3.57 3.38 2.79 2.33 1.43 4.04 3.57 1.30 0.83 0.74 0.83 0.73 0.83 0.74 0.83 0.74 0.95 0.14 99.959 JECT STATI JON: Lat Long n*10 /HOUR: OF TOT. C 40.54 1.91 3.59 2.66 1.91 1.91 2.72 1.34 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 0.93 1.93 1.93 0.93 1.93 0.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93 1</pre>	SAMP 256 257 258 300. 131 5 644 E 1212 300. 44 SAMP 259

DATE: 5/ 9/94 GEAR TYD start stop duration	PE: BT Not	6 1051	NOJECT STAT: TION:Lat Long	5 64 E 120
TIME :11:25:00 11:55:00 30 (min)) Furpose	coder	3	
LOG 15514.80 5516.40 1.60 FDEPTH: 79 80	Area co GearCon	de :	1	
BDEPTH: 79 80	Validit	y code:	1	
Towing dir: 340° Wire out:	250 m Sp	ech: 30	kn*10	
Sorted: 69 Kg Total catch:	69.45	CATO	H/HOURI	138.90
PECIES	CATCE/		1 OF TOT. 0	SNH0
agellus bellettii	weight : 52,10	nuadoers 612	37.51	26
hinobatos albomaculatus	23.00		16.56	
Nentex barnardi Fistularia petimba	23.00	54 14	16.56	26
teja mireletus	5.26	10	3.79	
iepia sp. Geus faber	4,38 3,80	26 10	3.15 2.74	
Centrophorus granulosus	3.40	2	2.45	
orpedo torpedo Trichiurus lepturus	3.10 2.54	6 2	2.23	
Denter canariensis	2.42	8	1.74	
Chaetodon hoefleri Octopus vulgaris	2.20	16	1.58	
Tachurus tregae Chelidonichthys lucerna	1.52	10	1.09	
lloteuthis africana	1.24	40	0.89	
ynoponticus ferox	0.68	2	0.49	
Aluterus monoceros Saurida brasiliensis	0.36	4 96	0.26	
epidotrigla carolae Tegusa lasceris	0.16 0.02	6 2	0.12	
CRABS	0.02	2	0.01	
otal	139.86		99.96	
	404190			
DATE: 5/ 9/94 GEAR TY	PE: BT Nor		NUMBER STAT	
start stop duration			Long	1 115
TIME 113116:00 13146:00 30 (min) LOG 15527.00 5528.50 1.50) Purpose Area co	codei de i	3	
FDEPTH: 142 141	GearCon	d.code:	-	
BDEPTH: 142 141 Towing dir: 340° Wire out:	Velidit			
	-			
Sorted: 125 Kg Total catchi	377.01	CATC	H/HOURI	754.02
PECIES	CATCH/I weight	HOUR NUMBERS	I OF TOT.	S SAH
Jabrina canaciensis	321.30	702	42.61	26
picara alta 'terothrissus belloci	111.30 103.#0	882 600	14.76 13.77	
Tachurus trecas	56.50	114	7,50	26
Ventem angolensis Synagrops microlepis	48,00 21.60	132 \$640	6.37 2.86	26
richiurus lepturus	21.00	43	2.79	
Nentex congoensis Illex coindetii	9.60 8.94	102 198	1.27	26
enter mecrophthelmus	7.44	24	0.99	
otopus vulgaris Titharus linguatula	7.14 6.90	6 138	0.95	
Franchiostegus semifasciatus	6.18	6	0.82	
sepidotrigla cadmani Naja straslani	4.98	43	0.66	
loops boops	4.26	126	0.49	
Sparus Auriga Naja miraletus	3.30 3.24	6	0.44	
agellus bellottii	3.24 2.76 1.74	2#	0.37	
Wiepus cadenati Jranoscopus polli	1.74	30 6	0.23	
Saurida bresiliensis	0.18	24	0,02	
Parapenneus longirostris, fem. Cynoglossus cadenati	0.18 0.18	54 24	0.02	26
Chlorophthalmus atlanticus	0.06	24	0.01	
Parapensaus longirostris, male	0.06	30	0.01	26
otal	754.92		100,12	
DATE: 5/ 9/94 GEAR TY			OJECT STAT	ION: 13
start stop duration	PE: BT Noi		TION:Lat Long	5 64 3 114
TIME :15:00:00 15:30:00 30 (min) LOG 15534.90 5536.40 1.50			3	
FDEPTH: 241 241	Area co GearCon	d.codes		
BDEPTH: 241 241	Validit	y code:	1	
	750 m Sp			
Sorted: 64 Kg Total catch:	432.91	CATC	HOUR:	\$65.\$2
PECIES	CATCH/		S OF TOT.	s sam
Chlorophthelmus atlanticus	weight 503.10	numbers 10764	58,11	
Ynsgrops microlepis	162,50	9062	14.77	
richiurus lepturus Sentem engolensis	57.98 52.52	182 122	6.70	26
quatina aculesta	30.00	2	3,46	10
Senopsis conchifer Toderopsis eblanae	21.58 13.40	182 104	2.49 1.55	
terothrissus belloci	10.14	52	1,17	
Meriuccius polli Parapenseus longirostris, fem.	6,68 5,08	40 728	0,77 0,59	27
Parapenaeus longirostris, fém. Parapenaeus longirostris, male	2.60	494	0,30	27
ershausanna Touðtioscits, meta	1.04	26	0.12	
ulopus cadenati				
Nulopus cadenati C R A B S	0.40	14	0,05	
ulopus cadenati	0,40	- 14	0,05 0.02 0.02	

			CT STATION	
DATE: 5/ 9/94 GEAR start stop duration TIME :17:48:00 18:18:00 30 (m	TYPE: BT No:6 L Lin) Purpose		NiLat S Long E	646 1144
LOG :5546.00 5547.70 1.70	Area cod GearCond	e : 1		
FDEPTH: 347 340 BDEPTH: 347 340	Validity t:1000 m Spe	code: 1	10	
		CATCH/ł		7.48
Sorted: 57 Kg Total cato PECIES	CATCH/B		OF TOT. C	SAMP
	weight n 165.76	umbers 2414	57.66	Jun
hlorophthalmus atlanticus erluccius polli	38.26	286	13.31	274
ACROURIDAE ynagrops microlepis	22.50 13.50	714	7.83	
richiurus lepturus erapenaeus longirostris, fem.	11.00	110 914	3.83	273
corpaena stephanica llex coindetii	10.30 4.76	280	3.58	
OPHIIDAE lesionika martia	3.30 2.80	54 564	1.15	
enopsis conchifer terothrissus belloci	1.76	4	0.61	
OTHIDAE arapenaeus longirostris, male	0.86	10 60	0.30	272
lalosaurus sp. Geryon maritag	0.26	4	0.09	
eristedion cataphractum	0.16	4	0.06	
otal	287.48		100.01	
	TYPE: BT No:6			645
start stop duration TIME :19:55:00 20:25:00 30 (s	ain) Purpose		Long E	1140
LOG 15555.30 5556.60 1.30 FDEPTH: 499 403	Area cod GearCond	.code:		
BDEPTH: 499 483 Towing dir: 350° Wire ou	Validity ut:1500 m Spe	code: 1 ed: 30 kn	1 0	
Sorted: 56 Kg Total cate				22.56
PECIES	CATCH/H		OF TOT. C	SAMP
Toplostethus mediterraneus	53.20	lumbers 1356	23.90	
ACROURIDAE richiurus lepturus	35.00 31.80	872 716	15.73 14.29	
OPHIIDAE entrophorus granulosus	22.92 22.60	68 72	10.30 10.15	
cyllarides herklotsii Merluccius polli	15.12 12.60	1080 40	6.79 5.66	
aromola cuvieri Aristeus varidens, female	9.28 5.16	2 312	4.17 2.32	276
CONOSTOMATIDAE Aristeus varidens, male	4.72 3.20	208 368	2.12	275
Nematocarcinus africanus Fodaropsis eblanae	2.76	992 12	1.24	
Halosaurus sp.	1.00	24	0.45	
Scorpaena angolensis	0.76	12		
Scorpaena angolensis Chlorophthalmus atlanticus ZEIDAE	0.76 0.60 0.40	12 8	0.27	
Scorpaena angolensis Chlorophthalmus atlanticus	0.76 0.60 0.40 0.08	12	0.27 0.18 0.04	
Soorpaena angolensis Shorophthalmus atlanticus ZEIDAE Peristedion cataphractum Total DATE: 5/ 9/94 GEAR	0.76 0.60 0.40 0.08 	12 8 4 Proj	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S	647
Scorpaena angolensis Chorophthalmus atlanticus ZEIDAE Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME :21:57:00 22:22:00 31 (LOG :5561.80 5563.30 1.50 FDETH: 607 622 BDETH: 607 622 Towing dir: 170 Vire of	0.76 0.60 0.40 222.56 . TYPE: BT No: min) Purpose Area cox GearCom Validity ut:1800 m Spe	12 8 4 PROJ 5 POSITI code: 3 de : 1 d.code: 1 d.code: 1 wed: 30 km	0.27 0.18 0.04 100.00 N:Lat S Long E	647 1138
Scorpaena angolensis Schorophhalmus atlanticus ZEIDAE eristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME :21157100 22:29:00 31 (LOG :5561.80 5563.30 1.50 ZDEFTH: 607 622 BDEFTH: 607 622	0.76 0.60 0.40 222.56 . TYPE: BT No: min) Purpose Area cox GearCom Validity ut:1800 m Spe	12 8 4 PROJ 5 POSITI code: 3 de : 1 d.code: 1 d.code: 1 wed: 30 km	0.27 0.18 0.04 100.00 N:Lat S Long E	647
Scorpaena angolensis Chorophthalmus atlanticus ZEIDAE Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio THE 12157100 22:22100 31 (LOG 15561.80 5563.30 1.50 TDETH: 607 622 BDETH: 607 622 Towing dir: 170 Wire or	0.76 0.60 0.40 222.56 . TYPE: BT No:: main) Purpose Maraa Coo GearCoo Yalidit; ut:1800 m Sp: ch: 123.83 . CATCH/I	12 8 4 PROJ 6 POSITI code: 3 is : 1 d.code: 1 d.code: 1 hed: 30 km CATCH/ HOUR \$	0.27 0.18 0.04 100.00 N:Lat S Long E	647 1138
Socpaena angolensis Socpaena angolensis Exinopohthalmus etlanticus Exinax Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME 121157100 22128100 310 (LOG 15561.80 5563.30 1.50 FDEFTH: 607 622 BDEFTH: 607 622 Towing diri 170* Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus maditerraneus	0.76 0.60 0.40 0.08 222.56 TYPE: BT No:(m min) Purpose Mrascow GearCom Validity ut:1800 m Spe cch: 123.83 CATCH// wight i56.06	12 8 4 4 5 PROJ 5 POSITI code: 3 is : 1 j.code: 3 j.code: 1 j.code: 1 kode: 3 know cAtCH/ HOUR & Numbers 5410	0.27 0.18 0.04 100.00 N:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11	647 1138 39.67
Socpaena angolensis Socpaena angolensis Exinopohthalmus etlanticus Exina Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME 121157100 22128100 310 (LOG 15561.80 5563.30 1.50 FOEFTH: 607 622 BDEPTH: 607 622 BDEPTH: 607 622 Towing diri 170* Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROURIDAX Soyllarides hertlotsii	0.76 0.60 0.40 222.56 	12 8 4 4 5 PROJ 5 POSITI code: 3 3 is : 1 3 code: 3 1 sed: 30 km CATCH/ HOUR \$ Numbers 5410 406 1868	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E +10 HOUR: 2 OF TOT. C 65.11 13.21 7.99	647 1138 39.67
Socpaena angolensis Socpaena angolensis Exinary Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME 12157100 22:221:00 31 (LOG 15561.80 5563.30 1.50 TPDETH: 607 622 BDEPTH: 607 622 BDEPTH: 607 622 Towing diri 170* Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACRONGIDAE Soyllarides hertlotsii GONOSTOMATIDAE	0.76 0.60 0.40 222.56	12 3 4 4 5 6 POSITI 5 Code: 3 3 code: 3 1 code: 3 4 code: 1 5 code: 3 1 code: 3 1 code: 3 1 code: 4 5 code: 3 1 code: 3 1 code: 3 1 code: 3 1 code: 3 1 code: 4 1 code:	0.27 0.18 0.04 100.00 ECT STATIO ON'Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.99 4.63 2.73	647 1138 39.67
Socpaena angolensis Socpaena angolensis Chlorophthalmus etlanticus ZEIDAZ Peristedion catephractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME 12157100 22:221:00 31 (LOG 15561.80 5563.30 1.50 TOETH: 607 622 BDETH: 607 622 BDETH: 607 622 BDETH: 607 622 TOETH: 607 622 BDETH: 607 622 Socted: 49 Kg Total cat SPECIES Hoplostethus maditerraneus HACKOURDAR Soyllarides hertlotsii GONOSTOMATIDAE Nerluccius poli Nematocarcinus aficanus Contorphorus sp.	0.76 0.60 0.40 222.56	12 8 4 4 6 PROJ 6 POSITI code: 3 1.code: 1 1.code: 1 9 code: 1 1.code: 1 9 code: 1 9 code: 1 1.code: 3 1 code: 3 1 code: 4 1 c	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.99 4.63 2.73 2.33	647 1138 39.67
Socpaena angolensis Socpaena angolensis ESIDAX Peristedion cataphractum total DATE: 5/ 9/94 GEAR start stop duratio TIME 12157100 22:221:00 31 (LOG 15561.80 5563.30 1.50 TOEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 Socted: 49 Kg Total cat SPECIES Hoplostethus maditerraneus MACKOURLDAK Sorled: 49 Kg Total cat SPECIES Hoplostethus maditerraneus MACKOURLDAK Sorliarides herklotsii SONOSTOMATIDAE Merluccius poli Nematocarcinus aficanus Cantrophorus sp. Garyon maritae Ilex coindetii	0.76 0.60 0.40 222.56	12 8 4 4 6 PROJ 6 POSITI 6 POSITI 1.code: 3 1.code: 1 9 code: 1 1.code: 3 1 code: 1 9 code: 1 1.code: 4 1.code: 4 1.	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.92 4.63 2.73 2.33 0.67 0.55	647 1138 39.67 SAMP
Gorpaena angolensis Chorophthalmus atlanticus ESINA Peristedion catephractum rotal DATE: 5/ 9/94 GEAR start stop durato TIME 12157100 22:22100 31 (LOG 15561.80 5563.30 1.50 FDEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 Sorted: 49 Kg Total cat SPECIES Hoplostthus maiterraneus MACROURIDAE Sorted: 49 Kg Total cat SPECIES Hoplostthus maiterraneus MACROURIDAE Sorted: 9 Ficanus Controphorus spl. Gentrophorus spl. Gentrophorus spl. Gentrophorus sp. Gentrophorus sp. Gentropho	0.76 0.60 0.40 222.56 . TYPE: BT No:4 n min) Purpose Area coo GearCom Validit Ut:1800 m Spe ch: 123.83 CATCH/V veight 1 156.06 31.65 39.12 11.09 6.54 5.71 3.19 1.61 1.03 1.03 0.87	12 3 4 4 5 6 7 6 7 8 6 7 8 6 7 8 9 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.92 4.63 2.73 2.33 0.56 0.43 0.35	647 1138 39.67
Socpaena angolensis Socpaena angolensis ESIDAX Peristedion catephractum rotal DATE: 5/ 9/94 GEAR start stop duratio TIME 12187100 22:221:00 31 (LOG 15561.80 5563.30 1.50 TOEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 TOEFTH: 607 622 BDEFTH: 607 622 Societ 49 Kg Total cat SPECIES Hoplostethus mediterraneus MCCDURIDAE Scylarides herklotsii GONOSTOMATIDAE Scylarides herklotsi Gontoshorus sp. Geryon maritae Ilax coincleti Aristaus varidens, female Aristaus varidens, female Aristaus varidens, female Aristaus varidens, male Halosaurus sp.	0.76 0.60 0.40 222.56 . TYPE: BT No:4 n min) Purpose Area coo GearCom Validity ut:1800 m Spe ch: 123.83 CATCH/ veight 1 156.06 31.65 19.12 11.09 6.54 5.71 3.19 1.61 1.03 0.87 0.83 0.39	12 3 4 4 5 6 7 6 7 8 1 1 5 4 4 5 4 1 1 1 1 1 1 1 1 1 1 1 1 1	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.32 4.63 2.73 2.33 0.67 0.56 0.43 0.43 0.43 0.43 0.45 0.55 0.15	647 1138 39.67 SAMP
Socpaena angolensis Socpaena angolensis ESIDAX Peristedion catephractum Fotal DATE: 5/ 9/94 GEAR start stop duratio TIME 12187100 22:221:00 31 (LOG 15561.80 5563.30 1.50 TOEFTH: 607 622 BDEFTH: 607 622 BDEFTH: 607 622 DEFTH: 607 622 DEFTH: 607 622 Societ 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROURIDAE Scylarides herklotsii GONOSTOMATIDAE Scylarides herklotsi GONOSTOMATIDAE Schtophorus sp. Geryon macitae Ilax coincleii Aristaus varidens, female Aristaus varidens, female Aristaus varidens, male Halosaurus sp. Solyphus marsupialis Soloncore afficame	0.76 0.60 0.40 0.08 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validi; 1123.83 CATCH// veight 1 156.06 31.65 19.12 1.65 19.12 1.65 19.13 1.65 1.03 0.67 0.83 0.39 0.35 0.19	12 3 4 4 5 6 7 6 7 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 2.33 0.66 0.43 0.56 0.35 0.15 0.05	647 1138 39.67 SAMP
icorpaena angolensis icorpaena angolensis ESIDAS Peristedion cataphractum total DATE: 5/ 9/94 GEAR start stop duratio TIME (21157100 22:20:00 31 (LOG 15561.80 5563.30 1.50 TOEFTH: 607 622 BDEFTH: 607 622 DEFTH: 607 622 DEFTH: 607 622 DEFTH: 607 622 Sorted: 49 Kg Total cat SPECIES Soplostethus mediterraneus MCCOURIDAE Soplostethus mediterraneus MCCOURIDAE Soplostethus mediterraneus Machouri DAE Soplostethus selleria Soplostethus selleria Soplostethus selleria Soplostethus selleria Soplostethus selleria Soplostethus sp. Saryon maritae Illax colociti Aristeus varidens, female Aristeus varidens, female Aristeus varidens, female Aristeus catelenis Solenocera africene Peristedion cataphractum	0.76 0.60 0.40 0.08 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validi; 1123.83 CATCH// veight 123.83 CATCH/ veight 1.65 19.12 1.65 19.12 1.65 19.13 1.65 19.13 1.65 1.03 0.87 0.83 0.39 0.35 0.19	12 8 8 4 4 6 PROJET 5 POSITI 5 POSITI 5 Code: 3 3 code: 3 9 code: 1 1 sed: 30 km CATCH/ HOUR & 1 sed: 323 1 sed	0.27 0.18 0.04 100.00 ECT STATIO ON: Lat 5 Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 2.33 0.66 0.43 0.35 0.35 0.15 0.06	647 1138 39.67 SAMP
corpana angolensis hiorophthalsus atlanticus EIDAE eristedion cataphractum otal DATE: 5/ 9/94 GEAR start stop duratio TIME 12157100 22:28100 31 (LOG 15561.80 5563.30 1.50 FUEFTH: 607 622 BDEFTH: 607 622 Dowing dir: 1700 Wire or Sorted: 49 Kg Total cat Sorted: 49 Kg Total cat Sorted: 49 Kg Total cat Checken Count DAE Sorted: 49 Kg Total cat Second the section of the second Sorted: 50 Kg Total cat Second Second Second Second Second Second Second Second S	0.76 0.60 0.40 0.08 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validi; 1123.83 CATCH// veight 1 156.06 31.65 19.12 1.65 19.12 1.65 19.13 1.65 1.03 0.67 0.83 0.39 0.35 0.19	12 3 4 4 5 6 7 6 7 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 2.33 0.66 0.43 0.56 0.35 0.15 0.05	647 1138 39.67 SAMP
Gorpaena angolensis Chorophthalmus atlanticus ESINA Peristedion catephractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME :21:57:00 22:20:00 31 (LOG :5561.80 5563.30 1.50 TOEFTH: 607 622 BOEFTH: 607 622 BOEFTH: 607 622 DOWING dir 1700 Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWRIDAE Soyliarides herklotsi Soylostethus mediterraneus MacROWRIDAE Soyliarides herklotsi Soylostethus seliteraneus MacROWRIDAE Soylostethus sp. Garyon maritae Ilex coinceili Aristeus varidens, female Aristeus varidens, female Aristeus varidens, female Aristeus stidens, female Aristeus catelesis Solencera africene Peristedion catephractum	0.76 0.60 0.40 0.08 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validi; 1123.83 CATCH// veight 123.83 CATCH/ veight 1.65 19.12 1.65 19.12 1.65 19.13 1.65 19.13 1.65 1.03 0.87 0.83 0.39 0.35 0.19	12 3 4 4 5 6 7 6 7 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON: Lat 5 Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 2.33 0.66 0.43 0.35 0.35 0.15 0.06	647 1138 39.67 SAMP
Socpaena angolensis Socpaena angolensis Chlorophthalmus etlanticus ZEIDAE Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME :21:57:00 22:28:00 31 (LOG :5561.80 5563.30 1.50 TOKing dir: 120 Toking dir: 170' Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWRIDAE Soyllarides herlutsii GoNOSTOMATIDAE Merluccius polli Nematocarcinus afficanus	0.76 0.60 0.40 0.08 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validi; 1123.83 CATCH// veight 123.83 CATCH/ veight 1.65 19.12 1.65 19.12 1.65 19.13 1.65 19.13 1.65 1.03 0.87 0.83 0.39 0.35 0.19	12 3 4 4 5 PROJ 5 POSITI code: 3 is. : 1 5.code: 1 9.code: 1 1.code: 1 5.code: 1 5.code: 1 CATCH/ HOUR 5 10.code: 3 10.code: 3 10.code: 3 10.code: 4 4 4 4 10.code: 1 10.code: 4 5.code: 4 5.code: 1 10.code: 4 5.code: 4 5.code	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 2.33 0.67 0.56 0.43 0.35 0.35 0.15 0.00 100.21	647 1138 39.67 5АМР 278 277
Socpaena angolensis Chlorophthalmus atlanticus ZEIDAZ Peristedion catephractum Total DATE: 5/ 9/94 GEAN start stop duratio rist :21:57:00 22:20:00 31 (LOG :5561:80 5563:30 1.50 TOETH: 607 622 BOETH: 607 622 DOETH: 607 622 Toring dir: 170 Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWINDAE Scylarides heritotsi GonoSTOMATIDAE Seylarides heritotsi Controphorus sp. Linatian yaridens, female Aristeus varidens, female Aristeus varidens, female Aristeus varidens, female Aristeus varidens Halosaurus sp. Dienecra africana Peristedion catephractum Total	0.76 0.60 0.40 0.00 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validity Ut:1800 m 50 ch: 123.83 CATCH// weight 1 56.06 31.65 19.12 11.09 6.54 5.71 3.19 1.61 1.35 0.87 0.83 0.35 0.19 0.19 -240.17	12 8 4 4 6 PROJ TI code: 3 6 POSITI code: 3 14.code: y code: 1 3.code: y 4.code: 3 19 10.code: 3 19 1161 33 4 4 4 31 106 10 10 10 4 5 22 10 4 5 23 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 0.56 0.43 0.56 0.43 0.55 0.15 0.06 100.21	647 1138 39.67 SAMP 278 277 278 277
<pre>Socpaena angolensis Socpaena angolensis Shlorophthalmus atlanticus EXINA Peristedion catephractum Total DATE: 5/ 9/94 GEAN start stop duratio TIME :21:57:00 22:29:00 31 (LOG :5561:80 5563:30 1.50 TOEFTH: 607 622 BDETH: 607 622 DOWING dir 1700 Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWRIDAE Soylarides herblotsi SovostoMATIDAE Serving dir 1700 Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWRIDAE Soylarides herblotsi SovostoMATIDAE Meriuccius polli Nematocarcious africanus Cantrophorus sp. Liler coindetii Aristeus varidens, female Aristeus varidens, female Aristeus varidens, female Aristeus varidens, female Aristeus cardens, fem</pre>	0.76 0.60 0.40 0.00 	12 3 4 4 6 PROJ 6 POSITI code: 3 is : 1 3.code: 1 y code: 1 y cod: 1 1.cod: 1 6 10 10 10 10 10 10 4 4 4 3 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.38 4.63 2.38 4.63 2.38 0.67 0.43 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45	647 1138 39.67 SAMP 278 277 278 277
<pre>icorpaena angolensis icorpaena angolensis ithorophthalsus atlenticus EXIAX seristedion cataphractum itotal DATE: 5/ 9/94 GEAN start stop duratio TIME :21157100 22:28100 31 (LOG :5561.80 5563.30 1.50 TOEFTH: 607 622 BDETH: 607 622 Dowing dir: 1700 Wire or Sorted: 49 Kg Total cat SPECIES Soplostethus mediterraneus MCRCONGIDAE Soylartides herklotsii SovosrowArIDAE Seryon matites Illax coindetii Aristeus varidens, female Aristeus carites Illay coindetii Solenocera africanus Total DATE: 6/ 9/94 GEAN start stop duratio TitE: 10012010000150100 30 JOENTIDAE FOETH: 767 771</pre>	0.76 0.60 0.40 0.00 222.56 TYPE: BT No:4 n min) Purpose Area coo GearCom Validity Ut:1800 m School CATCH// veight 1 123.83 CATCH// veight 1 3.19 1.65 19.12 11.09 6.54 5.71 3.19 1.65 19.12 11.09 6.54 5.71 3.19 0.55 0.19 0.35 0.19 0.19 0.19 0.25 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19	12 8 4 4 6 PROJ 6 POSITI code: 3 is : 1 y code: 1 y code: 1 y code: 1 CATCH/ HOUR & CATCH/ HOUR & 1866 1866 1866 1866 1866 1866 1866 1866 1866 1866 1866 1866 1866 19 10 4 4 4 4 5 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 0.56 0.43 0.56 0.43 0.55 0.15 0.06 100.21	647 1138 39.67 SAMP 278 277 278 277
icorpaena angolensis icorpaena angolensis istilacophthalsus atlenticus EXIAX Peristedion cataphractum iotal DATE: 5/ 9/94 GEAN start stop duratio TIME :21:57:00 22:28:00 31 (LOG :5561:80 5563:30 1.50 TOERTH: 607 622 BDETH: 607 622 DETTI: 607 622 DETTI: 607 622 DETTI: 607 622 Solution 1700 Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWICIDAE Soyliarides herblotsii SovostowArIDAE Setrophorus sp. SonstowArIDAE Setrophorus sp. LOPHILAE Entrophorus sp. LOPHILAE Solyphus marsupialis Solyphus ma	0.76 0.60 0.40 0.00 	12 8 4 4 6 PROJE 5 POSITI code: 3 is: code: 3 is: code: 3 is: code: 3 is: code: 3 4 4 4 4 4 106 10 10 10 4 4 4 4 106 10 10 4 4 4 4 106 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.38 4.63 2.38 1.33 0.67 0.55 0.55 0.35 0.15 0.08 0.015 0.00 100.21 PECT STATIC CON:Lat S Long E	647 1138 39.67 SAMP 278 277 278 277
<pre>icorpaena angolensis icorpaena angolensis ithorophthalsus atlanticus EXIAX seristedion cataphractum itotal DATE: 5/ 9/94 GEAR start stop duratio TIME 121157100 22128100 31 (LOG 15561.80 5563.30 1.50 TDEPTH: 607 622 Towing diri 170* Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MCCOURIDAX Soylarides herblotsi SomosfokATIDAX Serioratias fileanus Centrophorus sp. Sertom artice Illex coindetii Aristeus varidens, male Halosaurus sp. LOPHITAX Solphus marsupialis Solencoera africene Peristedion cataphractum Total DATE: 6/ 9/94 GEAR start stop duratic TIME 100120100 00150100 30 (LOG 15569.50 5571.10 1.60 FDEFTH: 767 771 BODEFTH: 767 771 BODEFTH: 767 771</pre>	0.76 0.60 0.40 0.40 	12 8 4 4 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 OF TOT. C 65.11 13.21 7.95 4.63 2.38 1.33 0.56 0.43 0.55 0.15 0.15 0.08 100.21 100.21	647 1138 39.67 SAMP 278 277 278 277
Gorpaena angolensis Chlorophthalsus atlanticus EXINAS Peristedion catephractum Fotal DATE: 5/ 9/94 GEAR start stop duratio TIME :21:57:00 22:28:00 31 (LOG :5561:80 5563:30 1.50 TOEFTH: 607 622 BOETH: 607 622 TOEFTH: 607 622 Toring dir 170' Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACRONRIDAE Soyliarides herblothi GonostonATIDAE Serving dir Canus Centrophorus sp. Genyon martue Tiles coindetii Aristaus varidens, female Aristaus varidens, female Total DATE: 6/ 9/94 GEAR start stop duratic THE :00:20:00 00:50:00 30 (LOG :5569:50 5571:10 1.60 FOETH: 767 771 BOETH: 767 771 BO	0.76 0.60 0.40 0.00 222.56 TYPE: BT No:4 n min) Purpose Area cox GearCom Validity ut:1800 m Sp CATCH// weight 123.83 CATCH// weight 136.06 31.65 19.12 11.09 6.54 5.71 3.19 1.61 1.35 0.87 0.83 0.35 0.19 0.19 240.17 X TYPE: BT No: o min) Purpose Area cox Stream Stream S	12 34 4 5 6 POSITI code: 3 is : 1 y code: 1 y code: 1 10 10 10 10 10 10 10 10 10 1	0.27 0.18 0.04 100.00 HCT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 0.27 0.56 0.43 0.25 0.35 0.15 0.06 0.06 100.21 PECT STATIC CON Lat S Long E	647 1138 39.67 SAHP 278 277 278 277 278 277 213 652 5 1136
Socpaena angolensis Socpaena angolensis Chlorophthalmus atlanticus ZEINAZ Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME 121157:00 22:28:00 31 (LOG 15561:80 5563:30 1.50 TOEFTH: 607 622 BOETH: 607 622 BOETH: 607 622 Towing dir. 170 Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWRIDAX Soyllarides herblotsi GonOSTOMATIDAE Merluccius poli Nesatocarcious afficanus Centrophorus sp. Genyon martue Tiles coindetii Aristaus varidens, female Aristaus varidens,	0.76 0.60 0.40 0.00 	12 34 4 5 6 7 6 7 10 10 10 10 10 10 10 10 10 10	0.27 0.18 0.04 100.00 HCT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.28 4.63 2.73 2.33 0.67 0.56 0.43 0.35 0.15 0.06 100.21 PECT STATIC CON:Lat S Long E	647 1138 39.67 SAHP 278 277 277 278 277 211 652 5 1136
<pre>Socpass angolensis Chlorophthalsus atlanticus EXINAS Peristedion cataphractum Fotal DATE: 5/ 9/94 GEAR start stop duratio TIME :21:57:00 22:28:00 31 (LOG :5561:80 5563:30 1.50 TOEFTH: 607 622 BOETH: 607 622 Towing dir 170' Wire or Sorted: 49 Kg Total cat SPECIES Hoplostethus mediterraneus MACROWRIDAE Solostethus mediterraneus MACROWRIDAE Solostethus mediterraneus MACROWRIDAE Solostethus mediterraneus Macrowritae Tiles coindetii Aristaus varidens, female Aristaus female Arista</pre>	0.76 0.60 0.40 0.00 	12 3 4 4 5 6 7 6 7 6 7 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	0.27 0.18 0.04 100.00 HCT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 2.73 2.33 0.67 0.66 0.43 0.35 0.15 0.06 0.00 100.21 FECT STATIC CON:Lat S Long E	647 1138 39.67 SAHP 278 277 278 277 278 277 213 652 5 1136
<pre>Socpass angolensis Chlorophthalsus atlanticus EXIMS Peristedion catephractum fotal DATE: 5/ 9/94 GEAR start stop duratio TIME 121157100 22:28:000 31 (LOG 15561.80 5563.30 1.50 TOEFTH: 607 622 DETEN: 607 622 Determine for 6</pre>	0.76 0.60 0.40 0.08 	12 3 4 4 6 7 6 7 6 7 6 7 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E *10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 0.27 0.25 0.27 0.25 0.15 0.25 0.15 0.00 100.21 70	647 1138 39.67 SAHP 278 277 278 277 278 277 213 652 5 1136
<pre>Socpass angolensis Chorophthalsus stlanticus EXIMA Peristedion cataphractum fotal DATE: 5/ 9/94 GEAR start stop duratio THE :21:57:00 22:28:00 31 (LOG :5561.80 5563.30 1.50 FOETH: 607 622 BDETH: 607 622 BDETH: 607 622 BDETH: 607 622 BOETH: 767 711 BOETH: 767 711 BOETH:</pre>	0.76 0.60 0.40 0.00 	12 3 4 4 6 7 6 7 6 7 6 7 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	0.27 0.18 0.04 100.00 ECT STATIO ON:Lat S Long E +10 HOUR: 2 0F TOT. C 65.11 13.21 7.98 4.63 0.27 0.26 0.43 0.27 0.25 0.15 0.06 0.05 0.05 0.15 0.05 0.15 0.00 100.21 PECT STATIC COM:Lat S Long E 100.75 0.55 0.15 0.00 0.00 100.71 0.55 0.15 0.00 0.00 100.71 0.55 0.15 0.00 0.00 100.71 0.55 0.15 0.00 0.00 0.00 0.00 0.00 0.0	647 1138 39.67 SAHP 278 277 277 278 277 211 652 5 1136
<pre>icorpaena angolensis :hlorophthalsus atlanticus EXIME *eristedion cataphractum total DATE: 5/ 9/94 GEAR start stop duratio TIME :21:57:00 22:28:00 31 (LOG :5561:80 5563:30 1.50 TOMETH: 607 622 Towing dir: 170* Wire or Sorted: 49 Kg Total cat SPECIES Hoplostathus maditerraneus MCROURIDAE Gonderins africanus Centrophorus sp. Gentrophorus s</pre>	0.76 0.76 0.60 0.40 0.00 	12 8 4 4 6 PROJ 6 POSITI code: 3 1e : 1 1 code: 1 9 code: 1 1 code: 2 1 code: 3 1 code: 2 1 code: 3 1 code: 3 1 code: 3 1 code: 3 1 code: 3 1 code: 4 1 code: 3 1 code: 4 1 code:	0.27 0.18 0.04 	647 1138 39.67 SAHP 278 277 277
<pre>Socpass angolensis Chlorophthalus atlanticus EXIDA Peristedion cataphractum Total DATE: 5/ 9/94 GEAR start stop duratio TIME 121157100 22128100 31 (LOG 15561.80 5563.30 1.50 TOMETH: 607 622 Towing dir: 170* Wire or Sorted: 49 Kg Total cat SPECIES Heplostethus maditerraneus MCROURIDAE Sortod: 49 Kg Total cat SPECIES Heplostethus maditerraneus MCROURIDAE SolomorowATIDAE SolomorowATIDAE Solomora Africanus Cantrophorus sp. Gentrophorus sp. Gentrophorus sp. Gentrophorus sp. Gentrophorus sp. DATE: 6/ 9/94 GEAR setistes varidens, Emale Aristeus varidens, Aristeus Aristeus varidens, Aristeus Aristeus Aris</pre>	0.76 0.76 0.60 0.40 0.00 	12 3 4 4 6 PROJ 5 POSITI code: 1 1.code: 1 9 1.code: 1 9 1.code: 1 4 4 4 1.1 1.code: 1 1.code: 2 1.code: 2 1.co	0.27 0.18 0.04 	647 1138 39.67 SAHP 278 277 278 277 278 277 213 652 5 1136

			ECT STATIO	
DATE: 6/ 9/94 GEAR 1	YPE: BT Noi6	POSITI		708
start stop duration			Long E	1151
	n) Purpose c			
LOG 15593.20 5594.70 1.50	Area code			
FDEPTH: 527 527	GearCond.			
BDEPTH: 527 527	Validity			
Towing dir: 148° Wire out	11500 m Speed	d: 30 km	•10	
Sorted: 26 Kg Total catch	136.69	CATCH/	HOUR: 2	73.30
SPECIES	CATCH/HO	UR 1	OF TOT. C	SAMP
	weight nu	abers		
Hoplostethus cadenati	87.50	2570	32.01	
GONOSTOMATIDAS	73.50	4640	26.89	
MACROURIDAE	42.50	750	15.55	
Scyllarides herklotsii	15.10	1140	5.52	
Nematocarcinus africanus	15.00	3970	5.49	
Aristeus varidens, female	15.00	450	5,49	201
Merluccius polli	13.50	30	4.94	
Aristeus varidens, male	4.90	120	1.79	280
Geryon maritae	3.58	10	1.31	
Sepia sp.	1.20	50	0.44	
CONGRIDAE	1.00	30	0.37	
Etmopterus spinax	0.40	10	0.15	
LOPHIIDAE	0.20	20	0.07	
Total	273.38		100.02	

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		PRO	JECT STAT	TON: 14
DATE: 6/ 9/94 GE	AR TYPE: BT NO		IONILAL	S 70
start stop durat			Long	E 115
	(min) Purpose	code: 3	,	
LOG 15606.00 5606.90 0.90				
FORPTH: 322 329		nd. Lader		
BDEPTH: 322 329		ty code: 1		
	out: 900 m Sp		•10	
	atchi 151.1		/BOUR:	533.47
Sorted: 60 Kg Total c	atchi 151.12	S CATCH,	BOOK	233.41
	CATCH	010178 \$	OF TOT.	C SAM
SPECIES	weight	numbers	OF 101.	
Chlorophthalmus atlanticus	206.65	3942	38.74	
Herluccius polli	129.71	441	24.31	
Synagrops microlepis	90.46	2840	16.96	
Trichiurus lepturus	46.59	325	8.73	
ACROURIDAE	41.75	1288	7.83	
iller coindetii	5.22	60	0.98	
LOPHIIDAE	3.81	7	0.71	
Priacanthus arenatus	2.47	7	0.46	
Solenocera africana	2.47	476	0.46	
Scorpaena angolensis	1.24	7	0.23	
Parapenaeus longirostris	1.16	106	0.22	
Peristedion cataphractum	0.99	35	0.19	
Scyllarides herklotsii	0.46	88	0.09	
Sepia sp.	0.35	18	0.07	
Zenopsis conchifer	0.28	7	0.05	
Total	533.61		100.03	

	E: BT No:		OJECT STAT	ION: 141 5 705 E 1157
			3 Long	B 115/
TIME :08:38:00 09:17:00 39 (min)			1	
LOG :5610.90 5612.70 1.80	Area co	de : d.code:	1	
FDEPTH: 262 275				
BDEPTH: 262 275		y code:		
Towing dir: 145° Wire out:	750 m Sp	med: 20	Kn*10	
Sorted: 90 Kg Total catch:	934.33	CATC	H/HOUR:	1437.43
SPECIES	CATCH		N OF TOT.	C SAMP
	weight	numbers		
Chlorophthalmus atlanticus	581.11	\$732	40.43	
Synagrops microlepis	545.65	26057	37.96	
Merluccius polli	114.54	540	7.97	
Pterothrissus belloci	37.86	175	2.63	
Trichiurus lepturus	37.55	95	2.61	
Zenopsis conchifer	25.14	111	1.75	
MACROURIDAE	21.00	223	1.46	
GOBIIDAE	20.05	\$\$77	1.39	
Denter angolensis	19.74	48	1.37	
Miracorvina angolensis	14.95	15	1.04	
Parapenaeus longirostris, fem.	6.37	652	0.44	
Illex coindetii	3.35	32	0.23	
Scorpaena angolensis	2.40	32	0.17	
Parapenaeus longirostris, male	1.91	254		
Solenocera africana	1.31	236	0.09	
Sepia sp.	1.28	63	0.09	
Peristedion cataphractum	1.15	32	0.08	
CYNOGLOSSIDAE	0,80	32	0.00	
Halosaurus sp.	0.65	15	0.05	
Scyllarides herklotsii	0.32	48	0.02	
Total	1437.13		99.9	ī

		PRO	JECT STATION	: 142
DATE: 6/ 9/94 GI	EAR TYPE: BT No:6	POSIT	ION:Lat 5	706
start stop dura	tion		Long E	1201
TIME :10:21:00 10:36:00 15	(min) Purpose o	code: 3		
LOG :5617.00 5618.00 0.80	0 Area code	1	1	
FDEPTH: 150 151	GearCond.	code:		
BDEPTH: 150 151	Validity			
Towing dir: 145° Wire	a out: 450 m Spee	id: 35 h	tn*10	
Sorted: 109 Kg Total o	catch: 109.69	CATC	i/Hour: 43	8.76
SPECIES	CATCH/HC	OUR 1	OF TOT. C	SAMP
		impers		
Trichiurus lepturus	115.00	100	26.21	
Spicara alta	102.80	616	23.43	
Trachurus trecae	58.40	92	13.31	287
Denter angolensis	58.20	160	13.26	286
Brotula barbata	23.40	16	5.33	
Zenopsis conchifer	19.40	40	4.42	
Umbrina canariensis	15.00	36	3.42	
Todaropsis eblanae	9.56	116	2.18	
Dentex macrophthalmus	8.16	32	1.86	
Sparus pagrus africanus	7.08	4	1.61	
Branchiostegus semifasciatus	6.68	8	1.52	
Miracorvina angolensis	4.48	28	1.02	
Chelidonichthys gabonensis	3.68	28	0.84	
Boops boops	1.56	44	0.36	
SERRANIDAE	1.44	12	0.33	
Bembrops heterurus	1.16	20	0.26	
Citharus linguatula	0.56	200	0.13	
Pterothrissus belloci	0.56	4	0.13	
Uranoscopus polli	0.40	4	0.09	
Peristedion cataphractum	0.40	12	0.09	
GONOSTONATIDAE	0.32	4	0.07	
GOBIIDAE	0.32	16	0.07	
Squilla mantis	0.20	4	0.05	
Total	438.76		99.99	

		PROJ	ECT STATIO	N: 143
DATE: 6/ 9/94 GEA	R TYPE: BT No:6	POSITI	ON:Lat 5	704
start stop durati	on		Long E	1209
	(min) Purpose	code: 3	•	
LOG :5626.00 5627.00 1.50	Area cod			
FDEPTH: 112 108	GearCond			
BDEPTH: 112 108	Validity			
Towing dir: 77° Wire	out: 330 m Spec	d: 30 kn	•10	
Sorted: 71 Kg Total ca	tch: 118.37	CATCH/	HOUR: 2	36.74
SPECIES	CATCH/H	OUR 1	OF TOT. C	SAMP
	weight n	unbers		
Dentex angolensis	70.00	460	29.57	288
Trachurus trecae	62.16	376	26.26	290
Dentez congoensis	33.50	524	14.15	289
richiurus lepturus	16,00	10	6.76	
Jmbrina canariensis	12.16	26	5.14	
Spicara alta	8.16	286	3.45	
Sepia officinalis hierredda	6.66	6	2.81	
Scomber japonicus	5.70	6	2.41	291
Branchiostegus semifasciatus	4.74	4	2.00	
Chelidonichthys gabonensis	4.44	40	1.88	
Citherus linguetule	3.30	84	1.39	
lodaropsis eblanae	2.14	76	0.90	
Lepidotrigla carolae	1.84	70	0.78	
Zenopsis conchifer	1.26	4	0.53	
parus pagrus africanus	1.24	4	0.52	
llex coindetii	1.06	54	0.45	
loops boops	0.94	56	0.40	
Dentex canariensis	0.56	4	0.24	
Chaetodon hoefleri	0.54	4	0.23	
Saurida brasiliensis	0.20	34	0.08	
Scorpaena normani	0.14	4	0.06	
Total	236.74		100.01	

		P	ROJECT STATI	ON: 144
DATE: 6/ 9/94 G	EAR TYPE: BT I	No:6 POS	ITION:Lat	S 701
start stop dura	tion		Long	E 1216
TIME :13:40:00 14:10:00 30	(min) Purp	ose code:	3	
LOG :5634.90 5636.40 1.5			i	
FDEPTH: 79 741	Geard	Cond. code:	-	
BDEPTH: 79 741		lity code:	1	
Towing dir: 360" Wire	out: 170 m	Speed: 30	kn*10	
Sorted: 65 Kg Total	catch: 65.	.72 CAT	CH/HOUR:	131.44
SPECIES		H/HOUR	I OF TOT. C	SAMP
51 BOLB5	Veight		or for. c	SARP
Pagellus bellottii	26.5		20,16	292
Allotauthis africana	19.00		14.46	292
Sparus aurica	10.90		14.46	
Sepia officinalis hierredda	9.4		8.29	294
Bentex barnardi	8.7			
Boops boops	6.4		6.63 4.87	295
Raja alba	6.20		4.87	
Chelidonichthys lucerna	5.3			
Denter canariensis	5.3		4.09	
Fistularia petimba	4.3		3.70	
Centrophorus granulosus	4.30		3.27	
Trachurum trecas	3.9		2.98	
Dentex angolensis	3.80		2.89	296
			2.72	293
Argyrosomus hololepidotus Epinephelus aeneus	3.00		2.33	
Sparus pagrus africanus	2.6		1.99	
			1.93	
Octopus vulgaris Chaetodon hoefleri	2.50		1.90	
Zeus faber	2.41		1.89	
Iller coindetii	2.3		1.78	
	2.20		1.67	
Citharus linguatula Anthias anthias	0.3		0.26	
	0.10		0.14	
Todaropsis eblanae	0.10		0.08	
Saurida brasiliensis	0.04		0.03	
Chaetodon marcellae	0.04	2	0.03	
Total	131.4	ī	99.99	

	PROJECT STATIC	
	TYPE: BT No:6 POSITION: Lat	
start stop duration		1236
TIME :17:00:00 17:38:00 30 (
LOG 15660.60 5662.10 1.50	Area code : 1	
FDEPTH: 30 31	GearCond.code:	
BDEPTH: 30 31	Validity code: 1	
Towing dif: 330" Wire ou	t: 100 m Speed: 30 kn*10	
Sorted: 50 Kg Total cat	hi 50.58 CATCH/HOURI 1	01.16
SPECIES	CATCH/HOUR & OF TOT. C	SAMP
	weight numbers	
Sepia officinalis hierredda	70.20 438 69.40	
Fistularia petimba	15.90 46 15.72	
Pagellus bellottii	2.60 16 2.57	
Raja miraletus	2.38 4 2.35	
Zeus faber	1.80 2 1.78	
Dentex bernardi	1.76 4 1.74	
Torpedo torpedo	1.38 2 1.36	
Chaetodon hoefleri	1.30 8 1.29	
Bothus podas africanus	1.04 2 1.03	
Trachurus trecae	1.02 2 1.01	
Boops boops Sparus caeruleostictus	0.84 50 0.83 0.40 2 0.40	
Sparus caeruleostictus Epinephelus alexandrinus *		
Balistes capriscus	0.34 2 0.34 0.20 2 0.20	
Balistes capriscus	0.20 2 0.20	
Total	101.16 100.02	
DATE: 7/ 9/94 GEAR	PROJECT STATIC TYPE: BT No:6 POSITION:Lat S	
start stop duration		1240
	in) Purpose code: 3	
LOG :5686.10 5686.50 0.40	Area code 1 1	
FDEPTH: 39 39	GearCond, code:	
BDEPTH: 39 39	Validity code: 1	
Towing dir: 254* Wire ou	t: 150 m Speed: 30 kn*10	
Sorted: 34 Kg Total cate	th: 34.01 CATCH/HOUR: 2	04.06

,					
SPECIES		CATCH	I/HOUR	N OF TOT.	C SAMP
		weight	numbers		
Dentex canariensis		\$6.70	162	42.49	297
Rhinobatos sp.		41.40	12	20.29)
Boops boops		14.10	1074	6.9	L
Pseudupeneus prayensis		9.18	60	4.50)
Sparus auriga		8.88	6	4.3	5
Zeus faber		8.40	24	4.12	
Pagellus bellottii		6.14	36	3.3	5
Balistes capriscus		6.60	6		
Sparus pagrus africanus		6.06	6	2.9	,
Rais miraletus		4.92	6		
Raja sp.		3.84	6		
Fistularia petimba		2.70	12		
Sepia sp.		2.16	12	1.00	5
Scorpaens stephanica		1.14	6		
Chaetodon hoefleri		0.72	12		
Chelidonichthys capensis		0.42	6		
Total	_	204.06		100.00	5

		PROJECT	STATION	+ 147
DATE: 7/ 9/94 GEAR	TYPE: ST Not6	POSITION		717
start stop duratio			Long E	1224
	ain) Purpose cod		bong is	1224
LOG :5696.30 5697.80 1.50	Area code	1 1		
FDEPTH: \$1 87	GearCond.co			
BDEPTH: \$1 87	Validity co			
Towing dir: 246° Wire ou				
lowing diri 240 wire of	IC: 250 E Speed:	30 gn-10		
Sorted: Kg Total cate	chi 433.86 i	CATCH/HOUI	Ri 86	7.72
SPECIES	CATCH/HOUR	I OF 1	ror.c	SAMP
	weight numb			
Trachurus trecae	646.52 1	190 1	74.51	298
Raja miraletus	31.64	42	3.65	
Dentex angolensis	29.26	154	3.37	
Dentex congoensis	28.42	840	3.28	299
Sparus caeruleostictus	27.72	28	3.19	
Trichiurus lepturus	22.54	28	2.60	
Dentex canariensis	21.70	70	2.50	
Sepia sp.	18.76	14	2.16	
Scorpaena angolensis	17.08	42	1.97	
Branchiostegus semifasciatus	14.98	42	1.73	
Boops boops	3.64	224	0.42	
Atractoscion acquidens	2.80	14	0.32	
Chaetodon hoefleri	2.10	14	0.24	
TRIGLIDAE	0.56	14	0.06	
Total	\$67.72	-10	00.00	

		PROJ	ECT STATION	: 148
DATE: 7/ 8/94 GEAR 1	YPE: BT No:			720
start stop duration			Long E	1223
TIME :09:48:00 10:00:00 12 (mi	in) Purpose	code: 3	-	
LOG :5705.50 5708.10 0.60	Area co	de rl		
FDEPTH: 140 142	GearCon	d.code:		
BDEPTH: 140 142		y code: 1		
Towing dir: 330° Wire out	::450 n. Sp	eed: 30 kn	•10	
Sorted: \$1 Kg Total catch	108.29	CATCH/	HOUR: 54	1.45
SPECIES	CATCH/	HOUR N	огтот. с	SAMP
	weight	numbers		
Dentex macrophthalmus	136.60	505	25.23	301
Spicara alta	101.60	565	10.76	
Dentex angolensis	100.60	285	18.58	300
Umbrina canariensis	66.30	150	12.24	
Synagrops microlepis	34.75	15300	6.42	
Brotula barbata	19.50	15	3.60	
Scorpaena angolanzis	12.25	40	2.26	
Citharus linguatula	11.90	145	2.20	
Zenopsis conchifer	9.70	5	1.79	
Epinephelus aeneus	\$.05 5.95	15	1.49	
Zeus faber	5.95	15	0.68	
Uranoscopus polli Illex coindetii	3.70	35	0.60	
	3.70	35	0.68	
Chelidonichthys sp. Chaetodon hoefleri	3.65	15	0.67	
Balistes capriscus	3.65	15	0.67	
Boops boops	3.55	40	0.66	
Parapristipoma octolineatum	3.50	5	0.65	
Dentex congoensis	3.25	š	0.60	
Trachuruz trecae	2.85	5	0.53	
Peristedion cataphractum	2.70	5	0.50	
Total	541.45		99.99	
locar	241.45			

	TYPE: BT Not		ON:Lat S	
unu ,, ,,,,,		6 POSITI		
start stop duration TIME :11:13:00 11:44:00 31 (m)	in) Purpose	code: 3	Long E	121
LOG 15712.30 5714.00 1.70	Area co			
	GearCon			
FDEPTH: 190 217 BDEPTH: 190 217		v code: 1		
	valicity		*10	
ioning alth 240 bitte ou				
Sorted: \$6 Kg Total cate	h: 660.78	CATCH	HOUR: 12	78.93
SP BCI ES	CATCH/I	HOUR 1	or tot. c	SAM
	weight	numbers		
Synagrops microlepis	494.63	25974	38.68	
Chlorophthalmus atlanticus	413.03	10390	32.29	
frichiurus lepturus	114.25	341	8,93	
Guatina aculeata	77.42	6	6.05	
Pterothrissus belloci	58.20	327	4.55	
Dentex angolensis	53.01	149	4.14	30
fodaropsis eblanas	15.04	141	1.18	
Parapenaeus longirostris, fem.	14.61	2299	1.14	30
Zenopsis conchifer	13.76	85	1.08	
Aulopus cadenati	9.08	99	0.71	
Parapenaeus longirostris, male	4.55	1006	0.36	30
Chelidonichthys gabonensis	2.85	29	0.22	
Uranoscopus albesca	1.28	14	0.10	
Uranoscopus polli	1.28	14	0.10	
Illex coindetii	1.28	29	0.10	
Cynoglossus canariensis	1.14	99	0.09	
Cynoglossus senegalensis	0.99	29	0.08	
CRABS	0.85	29	0.07	
Hymenocephalus italicus	0.56	14	0.04	
Coelorinchus coelorhincus	0.56	14	0.04	
Octopus vulgaris	0.29	14	0.02	
Unidentified fish	0.14	14	0.01	
Sepia sp.	0.14	43	0.01	
Total	1278.94		99.99	

		PR	OJECT STATIO	N: 150
DATE: 7/ 9/94 GEAR	TYPE: BT No.	:6 POSI	TION:Lat S	721
start stop duration			Long E	1215
TIME :12:40:00 13:10:00 30 (m	un) Purpos	a code:	3	
LOG :5717.10 5787.70 1.60	Area c	ode :	1	
FDEPTH: 246 246	GearCo	nd.code:		
BDEPTH: 246 246	Validi	ty code:	1	
Towing dir: 317" Wire ou	t: 750 m Sp	eed: 32	kn*10	
Sorted: \$7 Kg Total cato	n: 490.9	1 CATC	H/HOUR: 9	81.82
SPECIES	CATCH	/HOUR	N OF TOT. C	SAMP
	weight	numbers		
Synagrops microlepis	420.70	29988	42.85	
Diaphus sp.	189.04	67026	19.25	
Dentex angolensis	74.68	192	7.61	307
Trichiurus lepturus	72.54	182	7.39	
Merluccius polli	69.14	294	7.04	308
Chlorophthalmus atlanticus	53.26	872	5.42	
Zenopsis conchifer	43.18	216	4.40	
Parapenaeus longirostris, fem.	16.32	2098	1.66	306
Pterothrissus belloci	10.54	56	1.07	
Coelorinchus coelorhincus	9.64	226	0.98	
Todaropsis eblanae	5.44	56	0.55	
Parapenaeus longirostris, male	5.22	1450	0.53	305
Umbrina canariensis	5.22	12	0.53	
Spicara alta	2.72	12	0.28	
Scorpaena normani	0.90	22	0.09	
Sepia sp. 🛥	0.68	34	0.07	
Iller coindetii	0.46	12	0.05	
Cynoponticus ferox	0.22	12	0.02	
Total	979.90		99.79	

		280.7	ECT STATION	151
DATE: 7/ 9/94 GEAR T	YPE: BT No:6	POSITI		722
start stop duration		103111	Long E	1212
TIME 114120100 14150100 30 (mi	n) Purpose c	oder 3	20119	
LOG 15722.70 5724.20 1.50	Area code			
FDKPTH: 314 315	GearCond.			
BDEPTH: 314 315	Validity			
Towing dir: 130° Wire out:			• 10	
Towing dirt too Dirto out	p			
Sorted: 85 Kg Total catch	992.64	CATCH/	HOUR: 198	5.28
SPECIES	CATCH/BO	UR 1	OF TOT. C	SAMP
	weight nu	abers		
Chlorophthalmus atlanticus	1316.00	28444	66.29	
Merluccius polli	344.18	1214	17.34	311
Synagrops microlepis	226.34	7536	11.40	
Hoplostethus atlanticus	40.84	46	2.06	
MACROURIDAE	24.04	466	1.21	
Trichiurus lepturus	11.44	94	0.58	
Parapenaeus longirostris, fam.	7.70	886	0.39	310
Todaropsis eblanse	5.84	70	0.29	
Scomber japonicus	3.74	24	0.19	
Pontinus accraensis	2.34	234	0.12	
Parapenaeus longirostris, male	2.34	398	0.12	309
Peristedion cataphractum	0.48	24	0.02	
Total	1985.28		100.01	

	PROJECT STATI	ON: 152
DATE: 7/ 9/94 GEAR TY	PE: BT No:6 POSITION:Lat	5 722
start stop duration	Long	E 1207
TIME :16:20:00 16:50:00 30 (min) Purpose code: 3	
LOG :5731.40 5733.00 1.60	Area code : 1	
FDEPTH: 375 377	GearCond.code:	
BDEPTH: 375 377	Validity code: 1	
Towing dir: 317° Wire out:	1100 m Speed: 32 kn*10	
Sorted: 75 Kg Total catch:	278.75 CATCH/HOUR:	557.50
SPECIES	CATCH/HOUR & OF TOT. C	SAMP
	weight numbers	
Merluccius polli	329.66 1372 59.13	312
MACROURIDAE	\$8.32 5532 15.84	
5 H A R K 5	60.00 14 10.76	

MACROURIDAE	\$\$.32	5532	15.84	
SHARKS	60.00	14	10.76	
Trichiurus lepturus	29.32	220	5.26	
Chlorophthalmus atlanticus	11.66	194	2.09	
Chlorophthalmus sp.	10.72	194	1.92	
Epigonus pandionis	8.80	126	1.58	
LOPHIIDAS	6.60	274	1.18	
Todaropsis eblanae	4.72	40	0.85	
Pontinus accraensis	3.80	406	0.68	
Pteroscion peli	2.20	60	0.39	
Nematocarcinus africanus	0.92	120	0.17	
MURAENIDAE	0.52	6	0.09	
Peristedion cataphractum	0.26	34	0.05	
Total	557.50		99.99	

		PROJECT	STATION: 153
DATE: 7/ 9/94	GEAR TYPE: BT	to:6 POSITION:	Lat 5 572
start stop	duration		Long E 1204
TIME :18:07:00 18:38:0	0 31 (min) Purp	ose code: 3	
LOG 15737.80 5739.30	1.50 Area	code : 1	
FDEPTH: 452 459	Gear	Cond.code:	
BDEPTH: 452 459	Vali	dity code: 1	
Towing dirt 140°	Wire out:1350 m	Speed: 30 kn*10	
Sorted: 58 Kg T	otal catch: 116	.14 CATCH/HOU	R: 224.79
SPECIES	CAT	CH/HOUR 1 OF	TOT. C SAM
	weight	numbers	
Merluccius polli	111.2	9 255	49.51 31
MACROURIDAE	60.1	9 1444	26.78
Centrophorus granulosus	29.6	1 12	13.17

Centrophorus granulosus	29.61	12	13.17	
GONOSTOMATIDAE	6.97	286	3.10	
LOPHIIDAE	6.23	120	2.77	
Scyllarides herklotsii	2.90	225	1.29	
Gervon maritae	2.48	4	1.10	
Hoplostethus cadenati	1.94	39	0.86	
Trichiurus lepturus	1.55	58	0.69	
Aristeus varidens	0.97	77	0.43	
Glyphus marsupialis	0.39	8	0.17	
Halosaurus sp.	0.27	8	0.12	
Total	224.79		99.99	

DATE: 7/ 9/94	GEAR TYPE	T BT Nore		DJECT STATI	5 728
start stop	duration			Long	E 1204
TIME :19:50:00 20:28:0		Purpose	code: 3	; ,	
LOG 15743.50 5745.00	1.50	Area cod			
FDEPTH: 559 567		GearCond	.code:		
BORPTH: 559 567		Validity	code: :	L	
Towing dir: 140°	Wire out:16	50 a Spe	ed: 30 1	(n*10	
Sorted: 52 Kg T	otal catch:	248.43	CATC	i/Hour:	496.86
SPECIES		CATCH/H	iour (OF TOT. (: SAME
	2		usbers		
Nematocarcinus africanus		259.82	43300	52.29	
HACROURIDAE		125.40		25.24	
Merluccius polli		41.00	76	\$,41	314
GONOSTOMATIDAE		25.26		5.0\$	
Scyllarides herklotsii		20.80		4,19	
Hoplostethus sp.		17.28	438	3,4\$	
Centrophorus sp.		2.18	10	0.44	
LOPHI I DAE		1.42	96	0,29	
Geryon maritae		1.22	10	0.25	
Illex coindetii		0.66	10	0.13	
Aristeus varidens		0.56	20	0.11	
Trichiurus lepturus		0.46	10	0.09	
Total		496.86		100.00	

	PROJECT STATION: 155
DATE: 7/ 9/94 GEAR TY	PE: BT No:6 POSITION:Lat S 731
start stop duration	Long E 1202
TIME :22:15:00 22:45:00 30 (mir) Purpose code: 3
LOG :5751.30 5752.40 1.10	Area coda : 1
FDEPTH: 700 711	GearCond.code:
BDEFTH: 700 711	Validity code: 1
Towing dir: 140° Wire out:	2100 m Speed: 22 kn*10
Sorted: 19 Kg Total catch:	99.00 CATCH/HOUR: 198.00
SPECIES	CATCH/HOUR & OF TOT. C SAMP
	weight numbers
MACRONISTANT	171 50 3750 86 67

NACIOUKLDAS	1(1-20	3/30	80.02
GONOSTONATIDAE	6.60	70	3.33
Hoplostethus mediterraneus	4.90	90	2.47
Relosaurus sp.	0.90	10	0.45
Total	183.90		92.87

		PROJ	ECT STATIO	N: 156
DATE: 4/ 9/94 GEAN	TYPE: BT Not	6 POSITI	ONILat 5	734
start stop duratio	n		Long E	1228
TIME 102:50:00 03:20:00 30	(min) Purpose	code: 3		
LOG :5780.30 5781.80 1.50	Ares co			
FDEPTH: 400 393	GeerCon	d.code:		
BDEPTH: 400 393	Validity	y code: 1		
Towing dir: 330° Wire o	ut:1200 m Spe	ed: 30 kn	10	
Sorted: 40 Kg Totel ca	ch: 190.71	CATCH/	HOUA: 3	81.42
SPBCIES	CATCH/	HOUR 1	OF TOT. C	SAMP
	weight i	humbers		
Nematocarcinus africanus	310.96	87876	\$1.53	
SQUALIDAR	20.00	4	5.24	
NACROURI DAE	18.00	548	4.72	
Marluccius polli	12.60	36	3.30	
LOPHIIDAE	4.96	414	1.30	
Hoplostethus cadenati	3.52	90	0.92	
TETRACIONTIDAE	1.98	46	0.52	
GONOSTONATIDAE	1.98	64	0.52	
Trichiurus lepturus	1.72	54	0.45	
Aristeus varidens, female	1.62	180	0.42	316
Chlorophthalmus atlanticus	1.36	28	0.36	
Aristeus varidens, male	1.26	154	0.33	315
Etmopterus spinax	1.00	28	0.26	
CRABS	0.36	18	0.09	
Scyllarides herklotsii	0.10	36	0.03	
Total	381.42		99,99	

		PROJEC	T STATIO	1: 157
DATE: 8/ 9/94 GEAR TY	PE: BT No:6	POSITION	i:Lat S	740
start stop duration			Long E	1232
TIME :06:49:00 07:19:00 30 (min) Purpose co	de: 3	-	
LOG :5800.80 5802.00 1.20	Area code	: 1		
FDEPTH: 270 258	GearCond.c	ode:		
BDEPTH: 270 258	Validity c	ode: 1		
Towing dir: 330" Wire out:	750 m Speed	: 25 kn*1	0	
Sorted: 57 Kg Totel catch:	171,69	CATCH/HO	NRI 3	13.38
SPECIES	CATCH/HOU		тот.с	SAMP
		bers		
GOBIIDAE	171.00		49.80	
Trichiurus lepturus	104.70	708	30.49	
Synagrops microlepis		2634	14.76	
Parapenaeus longirostris, fem.		1068	2.01	318
Lophi i dae	3.96	342	1.15	
Parapenaeus longirostris, male	3.72	678	1.08	317
Chlorophthalmus atlanticus	1.38	48	0.40	
Chelidonichthys capensis	0,90	6	0.26	
Zenopsis conchifer	0.12	6	0.03	
Total	343.38		99,98	

	PROJECT STATION: 15
DATE: 8/ 9/94 GEAR TY	PE: BT Not6 POSITION: Lat 5 74
start stop duration	Long E 123
TINE :08:10:00 08:47:00 37 (mir	a) Purpose order 3
LOG 17805.20 7807.00 1.40	Area code : 1
FDEPTH: 145 146	GearCond.code:
BORPTH: 145 146	Validity code: 1
Towing dir: 150° Wire out:	500 m Speed: 29 kn*10
Sorted: 117 Kg Total catch:	116.94 CATCH/HOUR: 189,63
SPECIES	CATCH/HOUR & OF TOT. C SAM
	weight numbers
Dentex angolensis	37.99 122 20.03 32
Dentes macrophthalmis	35.68 178 18,82 31
Trichiurus lepturus	35.35 47 14,64
Zenopsis conchifer	27.16 42 14.32 16.05 112 4.46
Spicers alts	9.65 2 5.09
Epinephelus sensus Illes coindetii	6.88 109 3.63
Brotula barbata	6,50 6 3,43
Chelidonichthys gabonensis	4.02 39 2.12
Zaus faber	2.64 8 1.39
Uranoscopus polli	1.23 11 0.65
Octopus sp.	1.20 2 0.63
Citharus linguatula	1.18 19 0,62
Saurida brazilianziz	0.92 120 0.49
Dentes congoensis	0.62 10 0.33
SOLEIDAE	0.45 2 0.24
MURAENIDAE	0.37 5 0.20
Pterothrissus belloci	0.34 2 0.18
Scorpagna angolensis	0.31 5 0.16
Scombergeorus tritor	0.29 2 0.15
SERRANIDAR	0.29 2 0.15
Boops boops	0,29 5 0.15
Bembrops heterurus	0.28 2 0.15
Total	109.69 100.03

					PROJI	CT STATIC	Ni 159
DATEI	\$/ 9/94		GEAR TYP	KI BT NOI	6 POSITIO	Wilat 3	737
	start	stop d	uration			Long L	1244
TIME	:10:20:00	10:55:00	35 (min)	Purpose	code: 3	-	
LOG	15818.20	5019.90	1.50	Ares co	de 11		
FDEFT	Hi 83	76		GearCon	d. c. de :		
BORFT	Ht \$3	76		Validit	y code: 1		
	Towing di	F1 62°	Wire out:	300 na Sp-	eed: 28 kn ^s	10	
Sor	ted: 120 Kg	Tot	al catch:	120.83	CATCE/I	iouri 2	07.14
SPECIES				CATCH/		олтот. с	SAMP
				wwight	и пере Св		
Dentex co	ngoensis			71.14	1958	34.34	323
Dentex an	colensis			41.31	936	19.94	322

Dentex congoensis	71,14	1958	34.34	323
Dentex angolensis	41.31	936	19.94	322
Sepia sp.	24,94	31	12.04	
Trichiurus lepturus	10.29	29	\$,\$3	
Pagellus bellottii	17.23	453	8,32	321
Zeus faber	4,23	26	3.97	
Chelidonichthys capensis	7.01	63	3.38	
Illex coindetii	4.22	123	2.04	
Denter barnerdi	4.17	12	2.01	
Zenopsis conchifer	3.77	5	1.02	
Spicara alta	1.97	14	0.95	
Raja miraletus	1.89	3	0.91	
Trachurus trecae	0.89	19	0.43	
Dentex macrophthalmus	0,86	5	0.42	
Citherus linguatula	0,81	21	0.39	
Chaetodon hoefleri	0.29	2	0.14	
Boops boops	0,12	9	0.06	
Total	207.14		99.99	
			1	

SPECIES											CH/1	IOUR		۱.	D F	tot.	с	57	MP
Sort	ed:		ĸ	9	Te	tal	cat	chi		33	2.47	¢	ATC	38/1	90U	IR:	18	8.8	2
	То	win	g d	163	340*	81 5		uči	170	B	Sp4	adı	30	kn*	10				
DDEPTH			52		52							/ cod							
FDEPTH			52		52							1.cod							
LOG				58		0.5	0				a coa		1						
					:26:00			min)				code		3					
			rt			dura										Long	Σ	12	252
DATE	8/	9/9	4			Ģ	LAR	TYP	51 E	ST.	Note	5 P	05)	TIC			5		742
																STA			

weight			
weignt	au n bers		
\$2.80	18	43.85	324
38.70	276	20.50	
23.28	18	12.33	
12.70	6	6.77	
12.54	774	6.64	
6.06	6	3.21	
4.20	36	2.22	
2,58	6	1.37	
2.52	6	1.33	
1.38	18	0.73	
0.96	6	0.51	
0.66	6	0.35	
0.10	6	0.10	
0.12	6	0.06	
0.12	6	0.06	
188.88		100.03	
	\$2.80 38.70 23.28 12.78 6.06 4.20 2.58 2.52 1.38 0.96 0.66 0.19 0.12	\$2,00 18 38,70 276 23,28 18 12,78 6 12,78 6 12,78 6 4,20 36 2,58 6 1,38 18 0,96 6 0,10 6 0,12 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

			JECT STATIO	
	R TYPE: BT NO			MI 101
		to PUSIT.		
start stop durati TIME :15:40:00 15:50:00 10			Long E	
LOG 15854.30 5854.70 0.40	(ann) Purpos Area c	ecode: 3 ode : 1		
FORPTH: 107 107		nd.code: 9		
		ty code: 9		
Towing dir: 330° Vire	OUCI 330 m 5		n-10	
Sorted: Kg Total ca	itch: 42.6	8 CATCH	/HOUR: 2	56.08
SPECIES	CATCH	/HOUR &	OF TOT. C	SAMP
	weight	numbers		
Epinephelus haifensis	138.00	6	53.89	326
Anthias anthias	38,16	372	14.90	
Raja miraletus	23.10	42	9.02	
Sarda sarda	22.86	12	8.93	325
Zeus faber	8.04	18	3.14	
Branchiostegus semifasciatus	6.48	6	2.53	
Dentex angolensis	6.30	12	2.46	
Dentex canariensis	4.98	12	1.94	
Sparus pagrus Africanus	3.42	6	1.34	
Scorpaena normani	1.08	12	0.42	
Chaetodon hoefleri	0.72	6	0.28	
Dentex macrophthalmus	0.72	6	0.28	
Boops boops	0.54	36	0.21	
Citharus linguatula	0.36	6	0.14	
MACROURIDAE	0.06	6	0.02	
Selene dorsalis	0.06	6	0.02	
Total	254.88		99.52	

	PROJECT STATION: 16	2
DATE: 8/ 9/94 GEAR T	YPE: BT No:6 POSITION:Lat S 73	L
start stop duration	Long E 123	3
	n) Purpose code: 3	
LOG 15862.00 5863.60 1.60	Area code : 1	
FDEPTH: 221 226	GearCond.code:	
BDEPTH: 221 226	Validity code: 1	
Towing dir: 324° Wire out		
Sorted: 29 Kg Total catch	t 129.49 CATCH/HOUR: 258.98	
Sortadi 29 kg Total Catch	123.43 CRICH/HOOKI 230.30	
SPECIES	CATCH/HOUR & OF TOT. C SAM	P
	weight numbers	
GOBIIDAE	127.00 88900 49.04	
Trichiurus lepturus	58.18 130 22.47	
Raja miraletus	14.90 10 5.75	
Synagrops microlepis	14.00 720 5.41	
Parapenaeus longirostris, male	13.60 2900 5.25 32	
Parapenaeus longirostris, fam.	13.00 2500 5.02 32	7
Chlorophthalmus atlanticus	10.00 520 3.86	
Dentex angolensis	3.50 10 1.35	
Merluccius polli	2.40 20 0.93	
Illex sp.	1.70 20 0.66	
CYNOGLOSSIDAE	0.30 30 0.12	
Sepia sp.	0.20 20 0.08	
Zenopsis conchifer	0.20 10 0.08	
Total	258.98 100.02	

	PROJECT STATION: 163
DATE: \$/ 9/94 GEAR T	PE: BT Noi6 POSITIONILat 5 752
start stop duration	Long E 123
TIME :18:11:00 18:41:00 30 (mi	
LOG :5867,20 5868,50 1.30	Area code : 1
FDEPTH: 359 358	GearCond.code:
BDEPTH: 359 358	Validity code: 1
Towing dir: 135° Wire out	:1050 m Speed: 24 kn*10
Sorted: 57 Kg Total catch	: 168.37 CATCH/HOUR: 336.74
SPECIES	CATCH/HOUR & OF TOT. C SAME
	weight numbers
Nematocarcinus africanus	223.14 56630 66.26
Memburgius nolli	66 94 160 10 95 320

Newarocercinus arricanus	223.19	30030	00.20	
Merluccius polli	66.84	160	19.85	32
MACROURIDAE	27.64	686	8.21	
LOPHIIDAE	7.34	238	2,18	
Chlorophthalmus atlanticus	3.36	70	1.00	
Illex sp.	2.44	28	0.72	
Trichiurus lepturus	2.16	22	0.64	
Pterothrissus belloci	1.74	8	0.52	
Parapenaeus longirostris	0.84	112	0.25	
Aristeus varidens	0.42	36	0.12	
CONGRIDAE	0.34	8	0.10	
SHARKS	0.34	8	0.10	
SERRANIDAE	0.14	9	0.04	
Total	336.74		99.99	

				T STATION	
DATE: 8/ 9/94	GEAR TYPE:	BT No:6	POSITION		756
	ration			Long E	1237
TIME :20:05:00 20:35:00		Purpose co			
		Area code	ŧ 1		
FDEPTH: 490 478		GearCond.c			
BDEPTH: 490 478		Validity c			
Towing dir: 175° W	ire out:165	0 m Speed	: 28 kn*1	0	
Sorted: 54 Kg Tota	l catch:	162.10	CATCH/HO	UR: 32	4.20
SPECIES		CATCH/HOU	K LOF	TOT. C	SAMP
	W6	ight num	bers		
Nematocarcinus africanus			3786	58.39	
Merluccius polli		74.10	162	22.86	330
MACROURIDAE		26.46	1470	8.16	
Aristeus varidens, male		12.20	1374	3.76	332
LOPHIIDAE		4.86	324	1.50	
GONOSTONATIDAE		4.80	324	1.48	
Aristeus varidens, female		4.44	222	1.37	331
Centrophorus granulosus		3.30	18	1.02	
Hoplostethus cadenati		3.06	108	0.94	
Geryon maritae		0.66	12	0.20	
Trichiurus lepturus		0.54	6	0.17	
Glyphus marsupialis		0.48	12	0.15	
oributo merospratro					
Total	3	324.20		100.00	

			PRO	JECT STATI	ON: 165
DATE: 8/ 9/94	GEAD TVD	E: BT No:			5 8011
	duration				E 1237
TIME 121:59:00 22:2		Purpose	code: 3		
LOG 15880.10 5881		Area co			
	572	GearCon	d. code :		
	572	Validit	code: 1		
	90* Wire out:1				
	Total catch:	152.01	C) # (71	/BOUR:	304.02
Sorted: 43 Kg	TOTAL CATCHI	152.01	CAICA	/ BOUKI	304.02
		-			e11/0
SPECIES		CATCH/		OF TOT. C	SAMP
		veight 239,76	47200	78.86	
Nematocarcinus africanus GONOSTOMATIDAE		239.70	\$15	9.51	
		13.66	36	4.49	
Merluccius polli MACROURIDAE		7.22	134	2.37	
		6.72	238	2.21	
Hoplostethus cadenati		1.96	238	0.64	
Scyllarides herklotsii					
SHARKS		1.76		0.50	
Aristeus varidens		1.20	106	0.39	
LOPHI I DAB		1.12	112	0.37	
Trichiurus lepturus		0.92	14	0.30	
Geryon maritae		0.50	22	0.16	
Halosaurus sp.		0.20	8	0.09	
Glyphus marsupialis		0.06	14	0.03	

304.10

100.00

Total

: 163 752 1237	PROJECT STATION: 166 DATE: 9/9/94 GEAR TYPE: BT Nois POSITION:Lat 3 007 start stop duration Long E 1239 TIME: 104:02:00 04:32:00 30 (min) Purpose code: 3 Long E 1239 LOG: 15925.70 5927.20 1.50 Area code: 1 FDEPTH: 488 502 GearCond.code: BDEPTH: 488 502 Validity code: 1 Torving dir: 340* Wire out:1450 m Speed; 30 km*10
5.74	Sorted: 19 Kg Total catch: 301.85 CATCH/HOUR; 603.70
SAMP	SPECIES CATCH/HOUR & OF TOT. C SAMP veight numbers
329	Nematocarcinus africanus 531.00 138330 87.96 Merluccius polli 24.20 44 4.01 333
	MACROURIDAE 15.60 360 2.58 GONOSTOMATIDAE 10.80 450 1.79
	Hoplostethus sp. 7.50 240 1.24 Etmopterus spinax 6.00 60 0.99
	Aristeus varidens, male 3.90 540 0.65 334 Aristeus varidens, female 2.70 150 0.45 335 Getyon maritae 1.40 2 0.23
	LOPHIIDAE 0.30 60 0.05 Scyllarides herklotsii 0.30 60 0.05
	Total 603.70 100.00

			NOT STATIO	
DATE: 9/ 9/94 GEAJ	TYPE: BT No:			
start stop duratio		5 FOSTI	Long E	
	(min) Furpose	code: 3	wong a	1245
LOG 15934.00 5936.00 2.00	Area coo	ie : 1		
FORPTR: 350 360	GeerCond			
BOKPTH: 350 360		code: 1		
Towing dir: 340" Wire o			10	
Sorted: 55 Kg Total can	toh: 137.36	CATCH/	HOUR: 2	74.72
BCIES	CATCH/1	IOUR \$	OF TOT. C	SAMP
	weight r	lunicers		
rluccius polli	172.40	746	62.75	336
CROURIDAE	47.54	2544	17.30	
lorophthelmus atlanticus	21.10	430	7.6\$	
arapenaeus longirostris, fem.	10.34	1390	3.76	337
peroglyphe mozelii	7.14	10	2.60	
lex coindetii	5.64	50	2.05	
OPHI I DAE	4.04	136	1.67	
mtinus accraensis	2.04	66	0.74	
nagrops microlepis	2.00	64	0.73	
srapenaeus longirostris, male	0.94	150	0.34	338
ligonus telescopus	0.54	6	0.20	
ryon maritae	0.50	6	0.18	
	0.40	6	0.15	
HARKS	0.10			

	PROJECT STATION: 160
DATE: 9/ 9/94 GEAR T	YPE: BT No:6 POSITION:Lat \$ \$10
start stop duration	Long E 124
TIME :0#:28:00 09:02:00 34 (mi	n) Purpose code: 3
LOG 15944,70 5945.40 0.70	Area code : 1
FDEPTH: 190 200	GearCond.code:
BDEPTH: 190 200	Validity code: 1
Towing dir: 155° Wire out	: 600 m Speed: 15 kn*10
Sorted: 65 Kg Total catch	: 195.36 CATCH/HOUR: 344.75
SPECIES	CATCH/HOUR & OF TOT. C SAME
	weight numbers
Chlorophthalmus stlanticus	189,26 5262 54,90
Trichiurus lepturus	60.88 212 17.66
Synagrops microlepis	35.47 1869 10.29
Parapenseus longirostris, fem.	15.09 2642 4.38 340
Parapenaeus longirostris, male	12.81 2557 3.72 339
Zenopsis conchifer	9.79 79 2.84
Illem coindetii	5.08 90 1.47
Pterothrissus belloci	4.76 37 1.38
Erythrocles monodi	4.39 5 1.27
Dentex macrophthalmus	3.23 11 0.94
Merluccius polli	2.49 48 0.72
HACROURIDAE	0.79 32 0.23
Uranoscopus polli	0.40 5 0.14
Sepia sp.	0.21 37 0.06
Total -	344.73 100.00

CATCH veight 74.70 61.05 52.80 33.15 12.45 11.37 10.89 9.30 8.61 4.86 4.62 4.53 4.55 3.72	numbers 273 45 159 27 24 18 18 21 90 93 6 150 18 12	1 OF TOT. C 19.95 16.30 14.10 8.95 7.21 5.09 4.05 3.32 3.04 2.91 2.48 2.30 1.30	занр 341 342
74.70 61.05 52.80 33.15 15.15 12.45 11.37 9.30 8.61 4.62 4.63 4.53 4.53	273 45 159 27 24 18 18 22 90 93 6 150 16 12	16.30 14.10 9.95 7.21 5.09 4.05 3.32 3.04 2.91 2.48 2.30	
61.05 52.80 33.15 27.00 19.05 15.15 12.45 11.37 10.89 9.30 8.61 4.86 4.62 4.53 4.53 4.35	45 159 27 24 18 21 90 93 6 150 18 12	16.30 14.10 9.95 7.21 5.09 4.05 3.32 3.04 2.91 2.48 2.30	
52.80 33.15 27.00 19.05 15.15 12.45 11.37 10.89 9.30 8.61 4.86 4.62 4.53 4.53 4.35	159 27 24 18 18 21 90 93 6 150 150 18 12	14.10 8.\$5 7.21 5.09 4.05 3.32 3.04 2.91 2.48 2.30	342
33,15 27.00 19.05 15.15 12.45 11.37 10.89 9,30 8.61 4.86 4.62 4.53 4.53 4.35	27 24 18 21 90 93 6 150 18 12	0,05 7,21 5,09 4,05 3,32 3,04 2,91 2,40 2,30	342
27.00 19.05 15.15 12.45 11.37 10.89 9.30 8.61 4.86 4.62 4.53 4.53 4.35	24 18 21 90 93 6 150 18 12	7.21 5.09 4.05 3.32 3.04 2.91 2.48 2.30	
19.05 15.15 12.45 11.37 10.89 9.30 8.61 4.86 4.62 4.53 4.53 4.35	18 18 21 90 93 6 150 18 12	5.09 4.05 3.32 3.04 2.91 2.48 2.30	
15,15 12,45 11,37 10,89 9,30 8,61 4,86 4,62 4,53 4,53 4,35	18 21 90 93 6 150 18 12	4.05 3.32 3.04 2.91 2.48 2.30	
11.37 10.89 9.30 8.61 4.86 4.62 4.53 4.53 4.53	90 93 6 150 18 12	3.32 3.04 2.91 2.48 2.30	
10,89 9,30 8,61 4,86 4,62 4,53 4,53 4,35	93 6 150 18 12	2.91 2.48 2.30	
9.30 8.61 4.86 4.62 4.53 4.53 4.53	6 150 18 12	2.48 2.30	
8.61 4.86 4.62 4.53 4.53 4.35	150 18 12	2.30	
4,86 4,62 4,53 4,53 4,35	18 12		
4.62 4.53 4.53 4.35	12	1.30	
4.53 4.53 4.35		1 22	
4.53		1.23	
4.35	210 273	1.21	
	6	1.16	
	39	0.99	
3.60	27	0.96	
3.45	9	0.92	
3.09	з	0.83	
1.02	30	0.27	
0.69	6	0.18	
0.03	6	0.01	
374.49		100.00	
	1.02 0.69 0.24 0.21 0.03 0.03	1.02 30 0.69 6 0.24 6 0.21 6 0.03 21 0.03 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

			NOJECT STAT	
DATE: 9/ 9/94 GEAR TY	PE: BT No:	6 POS	TIONILat	5 \$10
start stop duration			Long	¥ 1306
TIME :12:22:00 12:52:00 30 (min	Purpose	codes	3	
LOG 15967.40 5969.20 1.40	Area co	de s	1	
FDEPTH: 58 63	GearCon	d.codei		
BDEPTH: 58 63	Validit			
Towing dir: 311" Wire out:	180 a 5p	eed: 28	kn*10	
Sorted: 122 Kg Total catch:	640.16	CAT	H/HOUR:	\$80.32
SPECIES	CATCE/	HOUR	S OF TOT. C	5 SAMP
	velght	numbers		
Trachurus trecae	745.50	1604	\$4.69	343
Dentex canariensis	21.36	154	2.43	344
Epinephelus aencus	20,90	2	2.37	345
Stromateus fiatola	15.68	22	1.78	
Plectorhinchus méditerraneus	14.00	8	1.59	
Pagellus ballottii	10,78	70	1.22	
Dentex angolensis	9.94	70	1.13	
Sepia sp.	8.62	14	0.98	
Raja miraletus	6.52	14	0.74	
Sarda serda	5.46	2	0.62	346
Alloteuthis africana	5.40	11#50	0.61	
Denter macrophthalmus	3.58	- 14	0.41	
Trichiurus lepturus	3.30	8	0.37	
Chaetodon hoefleri	2.88	22	0.33	
Sphyraena guachancho	2.24	8	0.25	
Scomber japonicus	1.68	8	0.19	
Pomadasys incisus	0.92	8	0,10	
Brotula barbeta	0.78	9	0.09	
Illex coindetii	0.42	28	0.05	
Todaropsis eblanes	0.28	22	0.03	
Citherus linguatula	0.08	14	0.01	
Total	\$80.32		99.99	
,				

			PROJECT STA	ATION: 171
DATE: 9/ 9/94	GEAR TY	PE: BT No16	POSITION: Lat	5 815
start	stop duration		Long	1 E 1312
TIME 114:29:00	14:59:00 30 (min	Purpose co	der 3	
LOG :5980.90	59#2,20 1.30	Azes code	: 1	
PDEPTH: 36	39	GearCond, c	ede:	
BDEPTH: 36	39	Validity o	ode: 1	
Towing di	ir: 310° Wire out:	130 m Speed	: 26 kn*10	
C			as a set month -	<
Sorted: 79 Kg	g Total catchi	341.49	CATCH/HOURI	602.90

SPECIES	CATCH	/HOUR	OF TOT. C	SAMP
	weight	numbers		
Brachydeuterus auritus	443.56	3464	64.94	
Trichiurus lepturus	61.20	148	1,96	
Pentheroscion mbizi	37.08	3220	5,43	
Pseudotolithus senegalensis	26.92	26	3,94	347
Trachurus trecae	26,74	70	3.92	
Torpedo marmorata	18.40	60	2.69	
Stromateus fiatola	10.16	26	1.49	
Pomadasys incisus	9.82	44	1.44	
Cynoglossus sp.	8.42	164	1.23	
Argyrosomus hololepidotus	7.74	34	1.13	
Sepia sp.	6.70	122	0,98	
Pagellus bellottii	6.60	26	0.97	
Zeus feber	\$,56		0.81	
Spinephelus alexandrinus *	5.38	28	0.79	
Bodianus speciosus	5.12	1	0.75	
Selene dorsalis	2.96	28	0.43	
Parapristipome octolineatum	0.62	a	0.09	
Total	682.98		99,99	

		21	NOJECT STATIC	Mr: 172
DATE: 9/ 9/94	EAR TYPE: BT N	016 205	ITION:Lat 5	\$ \$25
start stop dur	tion		Long I	1316
TIME :16:40:00 17:10:00 30	(ain) Purpo	se Code:		
LOG 15995.70 1997.20 1.1	0 Area	code 1	1	
FDEPTH: 36 37	Geard	ond. code:		
BDEPTH: 36 37	Valid	Lity code:	1	
Towing dir: 340° Wit	e out: 130 m	Speed: 30	kn*10	
Sorted: \$3 Kg Total	catch: 258.	53 CAT	CH/HOURI	517.06
SPECIES	CATC	H/HOUR	S OF TOT. C	SAMP
	weight			
Brachydeuterus auritus	148.10		36.38	
Denter ceneriensis	79.20		15.32	368
Trachurus trecae	52.98	450	10.25	350
Trichiurus lepturus	49.80		9.63	
Pagellus bellottii	36.36	108	7.03	349
Spinsphelus acheus	36.10	4	6,98	
Sparus auriga	25.50	60	4.93	
Stromateus fiatole	12.54	24	2.43	
Argyrosomus hololepidotus	10,20	18	1.97	
Plectorhinchus mediterraneus	6.48	1	1.25	
Pomedasys incisus	5.22	: 18	1.01	
Raja miraletus	4.62	: 6	0.89	
Sepia sp.	4.20	12	0.81	
Serranus sp.	1.60	102	0.35	
MURAENIDAE	1.44	6	0.2#	
Cynoglossus sp.	1.30	42	0.27	
Merluccius capensis	1.14	120	0.22	
Total	\$17.06	5	100.00	

DATE: 9/9/94 GEAR 1 start stop duration	TYPE: BT No:6		ECT STATIO ON:Lat S Long E	825
	in) Purpose Area cod		, -	
FDEPTH: 74 \$1 BDEPTH: 74 \$1	GearCond Validity	.code: 1		
-	1 300 m Spe			
Sorted: 67 Kg Total catch	h: 299.66	CATCH/	HOUR: 5	99.32
PECIES	CATCH/H	OUR %	ог тот. с	SAMP
ynagrops microlepis richiurus lepturus		103860	43.33 12.76	
rotula barbata	54.00	64 72	9.01	
aja miraletus terothrissus belloci	32.76 30.70	252 172	5.47 5.12	
agellus bellottii epia sp.	28.62 21.42	64 54	4.78	
rachurus trecae Branchiostegus semifasciatus	16.20	18 54	2.70	
orpedo torpedo arapenaeus longirostris, fem. entex canariensis	7.84 5.40	3060 28	1.31 0.90	352
Argyrosomus hololepidotus Parapenaeus longirostris, male	3.42 2.88	10 1440	0.57	351
Chelidonichthys capensis Dentex angolensis	2.08	10 28	0.35	
Sitharus linguatula Synoglossus sp.	1.18	36 10	0.20	
total	599.38	••	100.02	
			ECT STATIC	
DATE: 9/9/94 GEAR start stop duration TIME :21:07:00 21:37:00 30 (mm	TYPE: BT Nore		Long I	
LOG 16023.00 6024.50 1.50	Area coo	le : 1		
FDEPTH: 355 352 BDEPTH: 355 352 Towing dir: 160° Wire out	GearCond Validity t:1050 m Spa	code: 1	*10	
Sorted: 52 Kg Total catc		CATCH/		84.90
·		-		
SPECIES	CATCH/H Weight r	านส่วงรร	OF TOT. C	SAMP
Merluccius polli Mematocarcinus africanus	69.36 44.28	198 16598	24.35	355
Parapenaeus longirostris, fem. Laemonema laureysi	34.66 27.50	3766	12.17	353
Centrophorus granulosus Illex coindetii	20.64 15.74	6 148	7.24	
Pterothrissus balloci Parapenaeus longirostris, male	15.40	100 506	5.41 5.24	354
MACROURIDAE Chlorophthalmus atlanticus	12.10 7.88	1304 188	4.25	
OPHICHTHIDAE LOPHIIDAE	6.82 6.34	132 270	2.39	
BIVALVES Trichiurus lepturus	3.64 2.82	94 34	1.28	
Hoplostethus cadenati Scorpaena angolensis	1.44	44	0.51 0.43	
Solenocera africana Total	285.04	28	0.10	
IOLAI	283.04		100.01	
			JECT STATI	
start stop duration		6 POSIT	ION:Lat :	
start stop duration TIME :23:17:00 23:47:00 30 (m LOG :6032.30 6033.70 1.40	in) Purpose Ares co	6 POSIT: code: 3 de : 1	ION:Lat :	5 832
start stop duration TIME:23:17:00 23:147:00 30 (m LOG :6032.30 6033.70 1.40 FDEPTH: 552 553 RDEPTH: 552 553	in) Purpose Area co GearCon Validit	6 POSIT: code: 3 de : 1 d.code: v code: 1	ION:Lat : Long	5 832
start stop duration THE :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FDEPTH: 552 553 BDEFTH: 552 553 BDEFTH: 552 553	in) Purpose Area con GearCon Validity t:1650 m Spe	6 POSIT: code: 3 de : 1 d.code: y code: 1 wed: 25 km	ION:Lat : Long n*10	5 832 5 1250
btart stop duration TIME :23:17:00 23:47:00 30 (m Log :6032.30 6033.70 1.40 FORFTH: 552 553 BOEFTH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total cate	in) Purpose Area com GearCom Validit t:1650 m Spo th: 215.24	6 POSIT: code: 3 de : 1 3.code: y code: 1 y code: 1 bed: 25 km CATCH.	ION: Lat : Long h*10 /HOUR:	5 832 5 1250 130.48
start stop duration TIME :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FORPTH: 552 553 FORPTH: 552 553 BOETH: 552 553 BOETH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total cate SPECIES SPECIES SPECIES SPECIES	in) Purpose Area co GearConn Validity tri1650 m Spi th: 215.24 CATCH// Weight	6 POSIT: code: 3 de : 1 d.code: y code: 1 bed: 25 kr CATCH. HOUR 1 numbers	ION:Lat : Long I *10 /HOUR: OF TOT. C	5 832 5 1250 130.48
start stop duration TIME :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FDEPTH: 552 553 DETH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAE	in) Purpose Area co GearCom Validit t:1650 m Spi ch: 215.24 CATCH// weight 380.00 12.00	6 POSIT: code: 3 ie : 1 d.code: 1 d.code: 1 y code: 1 wed: 25 kr CATCH. HOUR 1 numbers 80560 6	ION:Lat 2 Long 1 +10 /HOUR: OF TOT. C 88.27 2.79	5 832 5 1250 130.48
start stop duration TIME :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FDEPTH: 552 553 BDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total catc SPECIES Nematoccarcinus africanus SQUALIDAE GONOSTOWATIDAE MACROWINE	in) Purpose Area con GearCom Validit t:1650 m Spe ch: 215.24 CATCH// weight 380.00 12.00 9.60 9.20	6 POSIT: code: 3 de : 1 d.code: 1 y.code: 1 y.code: 1 x.cATCH. HOUR 1 NUMDERS 80560 6 440 380	ION:Lat : Long 1 /HOUR: OF TOT. C 80.27 2.79 2.23 2.14	5 832 5 1250 130.48
start stop duration TIME :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FDEFH: 552 553 DEFTH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Xg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GOMOSTORATIDAE MORDOWIDAE Hoplostathus cadenati Merluccius polli	in) Purpose Area con GearCom Validit; t:1650 m Spi ch: 215.24 CATCH// weight 380.00 12.00 9.60 9.20 6.20 5.08	6 POSIT: code: 3 de : 1 1.code: 1 sed: 25 kr CATCH. HOUR 1 NUMDETS 80560 6 440 380 240 10	CON:Lat :: Long 1 /HOUR: OF TOT. C 88.27 2.79 2.23 2.14 1.44 1.18	5 832 5 1250 130.48 SAMP 356
start stop duration TIME :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FDETH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GONOSTONATIDAE MACHOURIDAE Hoplostthus cadenati Merluccius polli Aristaus varidens, female Aristaus varidens, female	in) Purpose Area com GearCom Validit; tr1650 m Spi ch: 215.24 CATCH// weight : 380.00 12.00 9.20 6.20 6.20 6.20 6.20 5.08 3.60	6 POSIT: code: 3 is : 1 i.code: 2 y code: 1 rode: 25 kr CATCH. HOUR 1 numbers 80560 6 440 380 240 10 480 220	Lons Lat : Long 1 0+10 OF TOT. C 89.27 2.79 2.23 2.14 1.44 1.18 0.84 0.60	5 832 5 1250 130.48 SAMP
start stop duration TIME :23117100 23147100 30 (m LGG :6032.30 6033.70 1.40 FDETH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GONOSTOWATIDAE MACHOURIDAE MACHOURIDAE MACHOURIDAE MACHOURIDAE MACHOURIDAE Machouridae, gale Aristeus varidens, female Scyllarides herklotsii	in) Purpose Area com GearCom Validit tr1650 m Spi ch: 215.24 CATCH// weight 380.00 12.00 9.60 9.20 6.20 5.08 3.60 2.60 2.20	6 POSIT: code: 3 de : 1 d.code: y y code: 1 hed: 25 kr CATCH. HOUR % NUMBERS 80560 6 440 380 6 440 380 240 10 480	CON: Lat : Long 1 Long 1 (HOUR: OF TOT. C 89.27 2.79 2.79 2.14 1.44 1.19 0.84 0.60 0.51	5 832 5 1250 130.48 SAMP 3566 357
start stop duration TIME :23117100 23147100 30 (m LOG :6032.30 6033.70 1.40 FDEFTH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE SONOSTOWNTIDAE MACHOUNIDAE Hoplostethus cadenati Aristeus varidens, female Aristeus varidens, female Aristeus varidens, female Scyllarides herklotsii	in) Purpose Area com GearCom Validit; tr1650 m Spi ch: 215.24 CATCH// weight : 380.00 12.00 9.20 6.20 6.20 6.20 6.20 5.08 3.60	6 POSIT: code: 3 is : 1 i.code: 2 y code: 1 rode: 25 kr CATCH. HOUR 1 numbers 80560 6 440 380 240 10 480 220	Lons Lat : Long 1 0+10 OF TOT. C 89.27 2.79 2.23 2.14 1.44 1.18 0.84 0.60	5 832 5 1250 130.48 SAMP 3566 357
start stop duration TIME :23117100 23147100 30 (m LGG :6032.30 6033.70 1.40 FDETH: 552 553 Towing dir: 152" Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GONOSTOWATIDAE MACHOURIDAE MACHOURIDAE MACHOURIDAE MACHOURIDAE MACHOURIDAE Machouridae, gale Aristeus varidens, female Scyllarides herklotsii	in) Purpose Area com GearCom Validit tr1650 m Spi ch: 215.24 CATCH// weight 380.00 12.00 9.60 9.20 6.20 5.08 3.60 2.60 2.20	6 POSIT: code: 3 is : 1 i.code: 2 y code: 1 rode: 25 kr CATCH. HOUR 1 numbers 80560 6 440 380 240 10 480 220	CON: Lat : Long 1 Long 1 (HOUR: OF TOT. C 89.27 2.79 2.79 2.14 1.44 1.19 0.84 0.60 0.51	5 832 5 1250 130.48 SAMP 3566 357
start stop duration THE 123117100 23147100 30 (m LOG 16032.30 6033.70 1.40 FDEPTH: 552 553 BDEFTH: 552 553 Towing dir: 152* Wire ou	in) Purpose Area com GearCom Validit tr1650 m Spi ch: 215.24 CATCH// weight 380.00 12.00 9.60 9.20 6.20 5.08 3.60 2.60 2.20	6 POSIT: code: 3 is : 1 i.code: 1 y code: 1 y code: 1 s.code: 2 k cATCH. HOUR & numbers 80560 6 6 40 380 240 10 480 220 260	CON: Lat : Long 1 +10 OF TOT. C 89.27 2.79 2.23 2.23 2.23 2.24 4 1.44 1.44 1.44 0.84 0.51 100.00	5 832 5 1250 130.48 5AMP 356 357 358
start stop duration TIME :23117100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAE GONSTORATIDAE MACROURIDAE Hoplostthus cadenati Harluccius polli Aristaus varidans, female Scyllarides herklotsii Total	(in) Purpose Area com GearCom Validit t:1650 m Spi chi: 215.24 CATCH// Weight 380.00 9.20 9.20 5.08 3.60 2.20 430.48	6 POSIT: code: 3 is : 1 1.code: y code: 1 bed: 25 ki CATCH. HOUR 1 humbers 80566 6 400 380 240 10 480 220 260	CON: Lat : Long 1 	5 832 5 1250 130.48 5AMP 356 357 358 0N: 176 5 836
start stop duration TIME :23117100 23147100 30 (m LOG :6032,30 6033,70 1.40 FORFTH: 552 553 DDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAE SQUALIDAE SQUALIDAE Heineus varidane, state Aristeus varidane, male Aristeus varidane, female Scyllarides herklotsi1 Total DATE:10/ 9/94 GEAR start stop duration THE :01:00100 01:30:00 30 (m	(in) Purpose Area com GearCom Validit tri1650 m Spi tri1650 m Spi tri1650 m Spi tri1650 m Spi 380.00 2.40 9.60 9.60 9.60 9.60 2.60 2.60 2.60 2.60 2.60 430.48	6 POSIT: code: 3 is :1 i.code: 1 y.code: 1 y.code: 1 code: 1 80560 6 40 380 240 10 480 220 260 260 260 260 260 20 260 260 20 260 20 260 20 260 20 260 20 260 20 260 20 260 20 260 20 260 20 260 20 260 26	CON: Lat : Long 1 	5 832 5 1250 130.48 5AMP 356 357 358
DATE:10/ 9/94 GEAR Total Soliton 0130 (m LOG 16032,30 6033,70 1.40 FORFTH: 552 553 DDETH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SOULIDAE SOULIDAE Honorounidae DATE:10/ 9/94 GEAR Start stop duration Total DATE:10/ 9/94 GEAR Start stop duration Total	(in) Purpose Area com GearCom Validit t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi 380.00 12.00 9.60 9.60 9.60 2.60 2.60 2.60 2.60 2.60 430.48 TYPE: BT No: Area co GearCom	6 POSIT: code: 3 is :1 i.code: 1 y.code: 1 y.code: 1 w.code: 2 k: CATCH. HOUR 1 numbers 80560 6 40 380 240 10 480 220 260 260 260 260 260 260 260 260 26	LON: Lat : Long 1 *10 OF TOT. C 88.27 2.79 2.23 2.14 1.44 1.44 1.44 1.44 1.44 1.44 1.68 0.51 100.00	S 832 1250 130.48 SAMP 356 357 358 ON: 176 S 836
bart stop duration TIME :2317100 23147100 30 (m LOG :6032.30 6033.70 1.40 FORFTH: 552 553 BDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE SQUALIDAE SQUARTIDAE MACROURIDAE Hoplostathus cadenati Merinecus varidens, female Aristeus varidens, female Aristeus varidens, female Scyllarides herklotsii Total DATE: 10/ 9/94 GEAR start stop duration TIME :01:00:00 01:30:00 30 (m LOG : 6037.90 6039.50 1.60 FDEFTH: 680 652	(in) Purpose Area com GearCom Validit t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi 380.00 12.00 9.60 9.60 9.60 2.60 2.60 2.60 2.60 2.60 430.48 TYPE: BT No: Area co GearCom	6 POSIT: code: 3 is : 1 i.code: y y.code: 1 sed: 25 kr CATCH. HOUR to CATCH. CATCH. HOUR to CATCH.	CON: Lat : Long 1 	S 832 1250 130.48 SAMP 356 357 358 ON: 176 S 836
bart stop duration TIME :2317100 23147100 30 (m LOG :6032.30 6033.70 1.40 FORFTH: 552 553 BDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE SQUALIDAE SQUARTIDAE MACROURIDAE Hoplostathus cadenati Merinecus varidens, female Aristeus varidens, female Aristeus varidens, female Scyllarides herklotsii Total DATE: 10/ 9/94 GEAR start stop duration TIME :01:00:00 01:30:00 30 (m LOG : 6037.90 6039.50 1.60 FDEFTH: 680 652	(in) Purpose Area com GearCom Validit t:1650 m Sputhi 380.00 12.00 9.20 9.20 6.20 5.08 3.60 2.60 9.20 430.48 TYPE: BT No: Area co GearCom Validit t:22000 m Sp	6 POSIT: code: 3 is : 1 is : 1 is code: y code: 1 sed: 25 kr CATCH. HOUR to CATCH. CATCH. HOUR to CATCH. CATCH. 200 200 200 200 200 200 200 200 200 20	CON: Lat : Long 1 *10 OF TOT. C 88.27 2.79 2.23 2.14 1.49 0.66 0.51 100.00 JECT STATI ION: Lat Long	S 832 1250 130.48 SAMP 356 357 358 ON: 176 S 836
bart stop duration TIME :2317100 23147100 30 (m LOG :6032,30 6033,70 1.40 FPORTMI: 552 553 DEETH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SOULIDAE SOULIDAE SOULIDAE SOULIDAE Homotour Source and the	(in) Purpose Area con GearCom Validit t:1650 m Spi ih: 215.24 CATCH/ weight 380.00 12.00 9.20 9.20 6.20 5.08 3.60 2.60 9.20 430.48 TYPE: BT No: Area co GearCom Validit t:2000 m Sp ch: 228.24 CATCH/	6 POSIT: code: 3 is : 1 is : 1 is code: y code: 1 sed: 25 kr CATCH. HOUR to CATCH. CATCH. 200 200 260 PRO 6 POSIT code: 3 de : 1 d.code: y de: 1 d.code: 3 de: 1 d.code: 3 d.code: 4 d.code: 4	CON: Lat : Long 1 *10 OF TOT. C 88.27 2.79 2.23 2.14 1.49 0.66 0.51 100.00 JECT STATI ION: Lat Long	5 832 5 1250 130.48 5AMP 356 357 358 0N1 176 5 836 5 1250 456.48
start stop duration TIME :23117100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAS GONSTORATIDAE MACRONGIDAS GONSTORATIDAE MACRONGIDAS Soplorthus cadenati Marineus varidens, female Scyllarides herklotsi Total DATE:10/ 9/94 GEAR Start stop duration TIME :01:00:00 01:30:00 30 (m FOETH: 680 652 DOETH: 680 652 DOETH: 680 652 DOETH: 680 652 Towing dir: 170* Wire ou Sorted: 25 Kg Total cato SPECIES Hoplostethus cadenati	 in) Purpose Area con GearCom Validit t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi as 0.00 12.00 9.20 9.20 6.20 5.08 3.60 2.60 9.20 430.48 TYPE: BT No: 430.48 TYPE: BT No: 5.08 2.60 2.60 2.60 9.20 430.48 	6 POSIT: code: 3 is : 1 is : 1 is code: y code: 1 sed: 25 kr CATCH. HOUR to CATCH. CATCH. 200 200 200 200 200 200 200 200 200 20	CON: Lat : Long 1 *10 OF TOT. C 88.27 2.79 2.23 2.14 1.49 0.60 0.51 100.00 JECT STATI ION: Lat Long n*10 /HOUR: OF TOT. C 41.40	5 832 5 1250 130.48 5AMP 356 357 358 0N1 176 5 836 5 1250 456.48
start stop duration TIME :23117100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAS GONSTONATIDAE MACHOURIDAS GONSTONATIDAE Aristeus varidens, female Scyllarides herklotsi1 Total DATE:10/ 9/94 GEAR Start stop duration TIME :01:00:00 01:30:00 30 (m LOG :6037.30 6039.50 1.60 FDETH: 680 652 DDETH: 680 652 DDETH: 680 652 DDETH: 680 652 DDETH: 680 652 SUBJETH: 680 652 SUBJETH: 680 652 BDETH: 680 652 SUBJETH: 680 652 BDETH: 680 652	 in) Purpose Area con GearCom Validit t:1650 m Spi ih: 215.24 CATCH/ weight 12.00 9.20 9.20 9.20 60 9.20 6.00 9.20 6.00 2.60 9.20 3.60 2.20 430.48 	6 POSIT: code: 3 is : 1 is : 1 is code: y code: 1 ved: 25 kr CATCH. HOUR 10 480 220 260 10 480 220 260 10 480 220 260 10 480 220 260 10 480 220 260 10 480 220 260 10 480 220 260 10 480 220 260 10 480 481 481 481 481 481 481 481 481 481 481	CON: Lat : Long 1 +10 OF TOT. C 88.27 2.79 2.23 2.14 1.48 0.66 0.51 100.00 JECT STATI ION: Lat Long n*10 /HOUR: OF TOT. C 41.40 22.87 7.10	5 832 5 1250 130.48 5AMP 356 357 358 0N1 176 5 836 5 1250 456.48
start stop duration TIME :2317100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAE GONOSTONATIDAE MACDOURIDAE Hoplostethus cadenati MacDOURIDAE Hoplostethus cadenati Aristaus varidens, female Syllarides herklotsi1 Total DATE:10/ 9/94 GEAR start stop duration FDETH: 680 652 BOETH: 680 652 BOETH: 680 652 BOETH: 680 652 Sorted: 25 Kg Total cato SPECIES Hoplostethus cadenati MACCOURIDAE GONOSTONATIDAE SPECIES Hoplostethus cadenati MACCOURIDAE GONOSTONATIDAE Syllarides herklotsi1	 in) Purpose Area con GearCom Validit tri1650 m Spi tri1650 m Spi tri1650 m Spi tri100 m Spi cATCH// Validit validit cATCH// Validit cATCH// Salo.00 co co	6 POSIT: code: 3 is : 1 is : 1 is code: y code: 1 is code: y code: 1 is code: y code: 1 de : 1 d. code: y de : 1 d. code: 3 de : 1 d. code: 3 de : 1 d. code: 4 code: 3 de : 1 d. code: 4 solore 1 d. code: 4 solore 1 d. code: 3 de : 1 d. code: 3 de : 1 d. code: 4 solore 1 d. code: 4 solo	CON: Lat : : Long 1 	5 832 5 1250 130.48 5AMP 356 357 358 0N1 176 5 836 5 1250 456.48
start stop duration TIME :2317100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DUETH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GONOSTONATIDAE MACDOURIDAE Hoplostethus cadenati Marinecus varidens, female Syllaridae herklotsi1 Total DATE:10/ 9/94 GEAR start stop duration Aristeus varidens, female Syllaridae herklotsi1 Total DATE:10/ 9/94 GEAR Start stop duration TiME :0100100 01:30100 30 (m LOG :6037.39 6039.50 1.60 FDETH: 680 652 BOETH: 680 652 BOETH: 680 652 Sorted: 25 Kg Total catc SPECIES Hoplostethus cadenati MACROURIDAE GONOSTONATIDAE Scyllaride hertlotsi Geyon maritae Daphus sp-	<pre>in) Purpose Area com GearCom Validit t:1650 m Spi t:1650 m Spi t:1650 m Spi chr: 215.24 CATCH// weight 380.00 2.00 9.20 6.20 430.48 TYPE: BT No: Ain) Purpose Area co GearCom Validit t:228.24 CATCH/ weight 189.00 104.40 32.40 2.2.50</pre>	6 POSIT: code: 3 is : 1 is.code: 1 y.code: 1 wed: 25 ki CATCH. HOUR 1 HOUR 1 KOUR 1 ki.code: 3 de : 1 d.code: 3 de : 1 d.code: 1 d.code: 1 y.code: 1 code: 3 Ki.code: 1 y.code: 1 code: 3 ki.code: 1 y.code: 1 ki.code: 1 y.code: 1 y.code: 1 ki.code: 1 y.code: 1 y.code: 1 y.code: 1 ki.code: 1 y.code: 1 ki.code: 1 y.code: 1 y.code: 1 ki.code: 1 y.code: 1 ki.code: 1 y.code: 1 y.code: 1 ki.code: 1 y.code: 1 y.code: 1 y.code: 1 ki.code: 1 y.code: 1 ki.code: 1 y.code: 1 ki.code: 1 y.code: 1 ki.code: 1 ki.code: 1 y.code: 1 ki.code: 1 ki.	CON: Lat : : Long 1 *10 OF TOT. C 88.27 2.79 2.23 2.23 2.23 2.23 2.23 2.23 2.23 2.2	5 832 5 1250 130.48 5AMP 356 357 358 0N1 176 5 836 5 1250 456.48
start stop duration TIME :2317100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DUETH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GONOSTONATIDAE MACDOURIDAE Hoplostethus cadenati MacDOURIDAE Aristeus varidens, feasle Syllarides herklotsi1 Total DATE:10/ 9/94 GEAR misteus varidens, feasle Syllarides herklotsi1 Total DATE:10/ 9/94 GEAR Sorted: 25 Kg Total catc SPECIES Hoplostethus cadenati MACROURIDAE GONOSTONATIDAE Sorted: 25 Kg Total catc SPECIES Hoplostethus cadenati MACROURIDAE GONOSTONATIDAE Soyllarides hertlotsi1 Geryon maritae Diaphus sp- Nematocarcinus africanus Aristeus varidens, male	 in) Purpose Area con GearCom Validit t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi t:1650 m Spi 380.00 9.60 9.60 9.60 9.60 2.60 2.60 2.60 2.20 430.48 TYPE: BT No: Area co GearCon Validit t:228.24 cATCH// weight 189.00 104.40 32.40 2.2.50 2.1.60 2.2.50 	6 POSIT: code: 3 is : 1 i.code: 3 y code: 1 bed: 25 ki CATCH. HOUR 1 humbers 805660 6 440 240 240 240 240 240 240 240 240 240	CON: Lat : : Long 1 	5 832 5 1250 130.48 5AMP 356 357 358 0N1 176 5 836 5 1250 456.48
start stop duration TIME :2317100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DUETH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total catc SPECIES Nematocarcinus africanus SQUALIDAE GONOSTONATIDAE MACDOURIDAE Hoplostethus cadenati MacDOURIDAE Aristeus varidens, feaale Syllarides herklotsii Total DATE:10/ 9/94 GEAR start stop duration Aristeus varidens, feaale Syllarides herklotsii Total DATE:10/ 9/94 GEAR Sorted: 25 Kg Total catc SPECIES Hoplostethus cadenati MACROURIDAE GONOSTONATIDAE Sorted: 25 Kg Total catc SPECIES Hoplostethus cadenati MACROURIDAE GONOSTONATIDAE Syllarides hertlotsii GenosTONATIDAE Sorted: 25 Kg Total catc SPECIES Hoplostethus cadenati MACROURIDAE GONOSTONATIDAE Soyllarides hertlotsii Genos Total	 in) Purpose Area con GearCom Validit tri1650 m Spi tri1650 m Spi tri1650 m Spi tri1650 m Spi chri 215.24 CATCH// Weight 380.00 2.00 9.60 2.00 430.48 TYPE: BT No: Area co GearCon Validit tri228.24 CATCH// Weight 189.00 104.40 32.40 22.50 21.60 2.20 	6 POSIT: code: 3 is : 1 i.code: 3 is : 1 i.code: 3 vocde: 1 sed: 25 ki CATCH. HOUR 1 isod: 25 ki CATCH. 480 240 240 240 240 240 240 240 240 240 24	CON: Lat : Long 1 	S 832 1250 130.48 SAMP 356 357 358 ON: 176 S 836 E 1250 456.48 SAMP 359
start stop duration TIME :23117100 23147100 30 (m LOG :6032,30 6033,70 1.40 FDEFTH: 552 553 DDEFTH: 552 553 Towing dir: 152* Wire ou Sorted: 21 Kg Total cato SPECIES Nematocarcinus africanus SQUALIDAE GONSTORATIDAE MACRONGIDAE Nachoorgina Hoplostithus cadenati Hoplostithus cadenati Hoplostithus cadenati Aristeus varidens, male Aristeus varidens, male Aristeus varidens, female Scyllarides herklotsi Total DATE:10/ 9/94 GEAR start stop duration THE :0100100 01:30:00 30 (m LOG :6037,96 6039,50 1.60 FDEFTH: 680 652 DOETH: 680 652 Towing dir: 170* Wire ou Sorted: 25 Kg Total cato SPECIES Hoplostithus cadenati HACRONGIDAE Scyllarides herklotsi Serven arites Disphus spr- Nematocarcinus africanus Aristeus varidens, male	<pre>in) Purpose Area com GearCom Validit t:1650 m Spi t:1650 m Spi t:1650 m Spi 380.00 12.00 9.20 9.20 430.48 TYPE: BT No: Area co GearCom Validit t:2000 m Sp ch: 228.24 CATCH/ weight 189.00 104.40 32.40 27.72 24.66 22.50 1.60 8.82 7.74</pre>	6 POSIT: code: 3 is : 1 i.code: 3 is : 1 is : code: 3 v code: 1 v code: 1 v code: 1 is : code: 3 d : 1 d.code: 1 d : 2 code: 3 d : 1 d.code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 1 d : 2 code: 1 d : 2 code: 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 1 d : 2 code: 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 d : 2 code: 3 d : 1 d : 2 code: 1 code: 1 c	CON: Lat : Long 1 	S 832 1250 130.48 SAMP 356 5 836 E 1250 456.48 SAMP

DATE: 10/ 9/94 GEAR TY	PEI BT NO		OJECT STATI TION:Lat	5 84
start stop duration				
TIME :03:41:00 04:11:00 30 (min) Purpose	code:	3	
LOG :6049.30 6050.90 1.60	Area co		ĩ	
FDEPTH: 454 452	GearCo	d. codes	-	
BDKPTH: 454 452	Validi	y code:	1	
Towing dir: 15° Wire out:				
Sorted: 20 Kg Total catch:	152.49	CATC	H/HOUR1	304.98
SPECIES	CATCH	HOt TO,	N OF TOT. C	: SAM
	weight	numbers		
Nematocarcinus africanus	162.60	43356	53.31	
Merluccius polli	55.00	120	18.03	36
Diaphus sp.	16.80	4488	5.51	
Hoplostethus cadenati	11.16	372	3.66	
Aristeus varidens, male	10.80	2064		
Aristeus varidens, female	10.56	1968		
MACROURIDAE	10.20	456		
GONOSTONATIDAE	9.60	408	3.15	
Etmopterus spinax	9.48	192	3.11	
Trachipterus trachypterus	2.54	2	0.83	
Scyllarides herklotsii	2.28	252	0.75	
Todaropsis eblanae	1.00	12	0.59	
CONGRIDAE	1.61	12	0.55	
PORTUNIDAE	0.48	12	0.16	
Total	304.98		99.99	

										r stat		
DATE:	10/	9/94		GE	AR TYP	E: BT	No:6	POSI	TION	:Lat	s	845
		start	stop	durati	on					Long	E	1258
TIME	:06	:26:00	06:58:0	32	(min)	Purp	058 CO	de:	3	-		
LOG	: 60	61.70	6063.40	1.70		Area	code	1	1			
FDEPT	Hi	257	248			Gear	Cond.c	odes				
BOEPT	Н:	257	248			Vali	dity c	odet	1			
	Ťo	wing d	ir: 20*	Wire	out: '	750 m	Speed	: 29	kn*10)		

SPECIES		/HOUR	I OF TOT. C	5AMP
	weight	numbers		
Dentex angolensis	196.46	454	32.20	366
Gephyroberyx darwini	\$1.47	62	13.35	
Chlorophthalmus atlanticus	73.54	1063	12.05	
ferluccius polli	43.52	124		
Centrophorus granulosus	40.22	9	6.59	
Trichiurus lepturus	29.08	557	4.77	
Synagrops microlepis	26.81	1073	4.39	
Parapenaeus longirostris, male	26.10	4528	4.28	365
Parapenaeus longirostris, fem.	20.21	2876	3.31	364
Umbrina canariensis	18.36	21	3.01	
Miracorvina angolensis	14.14	21	2.32	
Bembroos heterurus	11.25	144	1.84	
MACROURIDAE	8.98	71	1.47	
Brotula barbata	5.27	21	0.86	
Epigonus telescopus	2.59	30	0.42	
Pterothrissus belloci	2.18	9	0.36	
SOLEIDAE	1.97	124	0.32	
Peristedion cataphractum	1.65	41	0.27	
Iller coindetii	1.56	30	0.26	
Uranoscopus polli	0.83	9	0.14	
MORIDAE	0.73	9	0.12	
Total	606.92		99.46	

			PR	OJECT STATIC	N: 179
DATE: 10/ 9/94	BEAR TYPE:	BT Not	6 POSI	TION:Lat S	842
	tion			Long I	: 1303
TIME :07:56:00 08:26:00 30		Purpose	code:		
106 16069.60 6071.10 1.1		Area co	de i	1	
FDEPTH: 124 119		GearCon	d. coder		
BDEPTH: 124 119		Validit	v code:	1	
Towing dir: 20" Win	e out: 46	0 a Sp	eed: 26	kn*10	
Sorted: 48 Kg Total	catchi	362.85	CATC	H/HOURI	25.70
SPECIES		CATCH/	Hour	I OF TOT. C	SAMP
			numbers		
Synagrops microlepis		44.06	16890	33.63	
Trachurus trecae		\$0.00	300	24.80	367
Brotula barbata		\$7.00	90	11.99	
Chlorophthalmus atlanticus		47.70	4334	6.57	
Pterothrissus belloci		36.46	210	5.02	
Dentex macrophthalmus		26.26	136	3.62	
Dentex angolensis		24.90	90	3.43	
Miracorvina angolensis		16.06	44	2.21	
Cynoglossus sp.		13.80	104	1.90	
Uranoscopus polli		13.66	104	1.88	
Citharus linguatula		8.10	104	1.12	
Chelidonichthys capensis		7.96	60	1.10	
Scomberomorus tritor		5.86	30	0.81	
Scorpaena angolensis		5.10	60	0.70	
Trachurus, Juveniles		2.70	614	0.37	
Merluccius polli		2.56	194	0.35	
Illex coindetii		1.80	44	0.25	
Spicara alta		1.80	44	0.25	
Total	7	25.78		100.00	

		PROJE	T STATION: 180
DATE: 10/ 9/94	GEAR TYPE: BT No	:6 POSITIO	i:Lat S 842
start stop	duration		Long E 1316
TIME :10:40:00 11:10:00	30 (min) Purpos	e code: 3	-
LOG 16085.30 6086.80	1.50 Area c	ode :1	
FDEPTH: 46 45	GearCo	nd.code: 1	
BDEPTH: 46 45	Validi	ty code:	
Towing dir: 0"	Wire out: 200 m 5	peed: 30 kn*1	0
Sorted: 1 Kg To	tal catch: 1.4	9 CATCH/H	UR: 2.98
SPECIES	CATCH	HOUR & O	TOT. C SAMP
	weight	numbers	
Trichiurus lepturus	2.40	4	80.54
CRABS	0.28	22	9.40
Citharus linguatula	0.18		6.04
Sepia sp.	0.12	2	4.03
Total	2.98		100.01

	PROJECT STATION: 181
DATE:11/ 9/94 GEAR T	YPE: BT No:6 POSITION:Lat 5 907
start stop duration	Long E 1235
TIME :23:55:00 00:25:00 30 (mi)	n) Purpose code: 3
LOG :6179.00 6180.50 1.50	Area code : 2
FDEPTH: 739 741	GearCond. code:
BDEPTH: 739 741	Validity code: 1
Towing dir: 210° Wire out	2100 m Speed: 30 kn*10
····· ·	
Sorted: 28 Kg Total catch:	: 197.82 CATCH/HOUR: 395,64
SPECIES	CATCH/HOUR & OF TOT, C SAMP
	weight numbers
GONOSTONATIDAE	131.60 2926 33.26
MACROURIDAE	124.60 1792 31.49
CRABS	28.98 70 7.32
Scyllarides herklotsii	27.16 2240 6.86
Arísteus varidens, female	20.72 980 5.24 369

Total	395.64		99.99		
Plesiopenaeus edwardsianus	0.42	14	0.11		
LOPHIIDAS	2.52	98	0.64		
Diaphus sp.	4.48	980	1.13		
Aristeus varidens, male	4.62	588	1.17	368	
Sepia sp.	6,30	28	1.59		
Merluccius polli	8.12	14	2.05		
CONGRIDAE	9.38	112	2.37		
Hoplostethus cadenati	12.04	84	3.04		
Trichiurus lepturus	14.70	406	3.72		

			PROJEC	T STATION	: 182
DATE: 12/ 9/94	GEAR TYPE	BT No:6	POSITION	Lat S	904
start stop di	iration			Long E	1240
TIME :02:43:00 03:13:00	30 (min)	Purpose co	de: 3		
LOG 16190.80 6192.30	1.50	Area code	: 2		
FDEPTH: 570 572		GearCond.c	:ode:		
BDEPTH: 570 572		Validity o	ode: 1		
Towing dir: 40° b	fire out:16	0 m Speed	: 30 kn*1	0	
Sorted: 24 Kg Tota	al catch:	62.43	CATCH/HO	UR: 12	4.86
SPECIES		CATCH/HOU		тот. с	SAMP
	¥.		bers		
Merluccius polli		31.50	60	25.23	372
MACROURIDAE		27.00	790	21.62	
GONOSTOMATIDAE		18.76	2100	15.02	
Trichiurus lepturus		13.00	240	10.41	
Hoplostethus cadenati		9.36	146	7,50	
Nematocarcinus africanus		7.00	1910	5.61	
CONGRIDAE		5.06	190	4.05	
Aristeus varidens, female		3.00	106	2.40	371
Scyllarides herklotsii		2.66	286	2.13	
Diaphus sp.		2.46	326	1.97	
Sepia sp.		1.90	10	1.52	
Aristeus varidens, male		1.30	176	1.04	370
LOPHIIDAE		0.70	26	0.56	
Etmopterus spinax		0.66	10	0.53	
Plesiopenaeus edwardsianus		0.50	66	0.40	

Total

		PROJECT STATIO	N: 183
DATE:12/ 9/94 GEAR	TYPE: BT No:6 P	OSITION:Lat S	905
start stop duration		Long E	1241
	In) Purpose code		
LOG :6201.40 6202.80 1.40	Area code	: 2	
FDEPTH: 453 460	GearCond.cod		
BDEPTH: 453 460	Validity cod		
Towing dir: 35° Wire ou	:1350 m Speed:	28 kn*10	
Sorted: 49 Kg Total catc	h: 147.32 C	ATCH/HOUR: 3	04.80
SPECIES	CATCH/HOUR	S OF TOT. C	SAMP
	weight numbe	r 5	
Merluccius polli	73.24 1	55 24.03	373
GONOSTOMATIDAE	38.92 23	77 12.77	
Hoplostethus cadenati	33.52 12	60 11.00	
Laemonema laureysi	18.12 2	86 5.94	
Aristeus varidens, female	17.63 12		374
LOPHIIDAE		49 5.54	
MACROURIDAE		00 5.28	
Centrophorus granulosus	15.00	4 4.92	
SHARKS		93 4.50	
Aristeus varidens, male		99 4.17	375
Trichiurus lepturus		79 3.40	
Lophiodes kempi	9,00	6 2.95	
OPHIDIIDAE		25 2.87	
BIVALVES		19 1.89	
Brosmiculus_imberbis * Trachinotus ovatus		92 1.32	
Centrolophus niger	3,95	12 1.30	
	2.30	6 1.02	
Geryon maritae Illex coindetii	2.30	6 0.75 6 0.29	
Scyllarides herklotsii		43 0.14	
Chlorophthalmus atlanticus		43 0.14 12 0.04	
caloropacatings sciencicus	0.12	14 0.04	
Total	304.79	99.98	

		PROJECT STATIO	
DATE: 12/ 9/94 GEAR TY	PE: BT No:6 PO	SITION:Lat S	905
start stop duration		Long E	1249
TIME :07:55:00 0\$:08:00 13 (min) Purpose code:	3	
LOG :6212.80 6213.70 0.90	Area code	: 2	
FDEPTH: 153 164	GearCond. code	1	
BDEPTH: 153 164	Validity c.de	. 1	
	600 m Speed: 3		
roung atte to the out	ovo m operation o	10	
Sorted: 88 Kg Total catch:	148.74 CA	TCH/HOUR: 6	16.49
SPECIES	CATCH/HOUR	N OF TOT. C	SAMP
	weight number		
Dentex angolensis	149.86 33		376
Denter macrophthalmus	121.85 28		377
Synagrops microlepis	67.02 375		311
Trichiurus lepturus			
Pterothrissus belloci	51.78 27		
Brotula barbata	39.28 2		
Zeus faber	38.26 9		
Chelidonichthys capensis	29.58 20		
Coelorinchus coelorhincus	26.58 90		
Uranoscopus polli	14.17 8		
Miracorvina angolensis	13.48 3	2 1.96	
Parapenaeus longirostris, fem.	12.60 274	2 1.84	37\$
Umbrina canariensis	10.38 3	2 1.51	
Merluccius polli	7.29 12	5 1.06	
GONOSTOMATIDAE	6.69 14		
Bembrops heterurus	5.58 5		
Trachurus trecae		9 0.73	
Epigonus telescopus	4.43 5		
Parapenaeus longirostris, male	4.43 109		379
Octopus vulgaris		9 0.54	3/3
Chlorophthalmus agassizi	2.40 6		
Brosmiculus imberbis *			
	2.31 12		
Scorpaena angolensis	1.66 1		
Cynoglossus sp.	1.30 6		
SOLEIDAR	0.83 1		
Zenopsis conchifer	0.83 1		
Illex coindetii	0.74 2	3 0.11	
Hoplostethus cadenati	0.69 4		
Peristedion cataphractum	0.51 1	4 0.07	
Geryon maritae		9 0.07	
Sepia sp.	0.32	9 0.05	
Total	6\$6.46	99,99	

		PRO	JECT STATIO	N: 185
DATE: 12/ 9/94	GEAR TYPE: BT	IOIG POSIT	ION:Lat 5	907
start stop	duration		Long K	1250
TIME :09:07:00 09:37:00	30 (min) Purpe	se code: 3		
LOG : 6220.10 6221.50		code 1 2	2	
FDEPTH: 85 90	Gear	cond.code:		
BDEPTH: \$5 90	Valio	lity code: 1		
Towing dir: 20°	Wire out: 250 m	Speed: 28 k	in*10	
Sorted: 96 Kg To	tal catch: 354.	19 CATCH	i/Hour: 7	0\$.38
SPECIES	CAT	H/HOUR 1	OF TOT. C	SAMP
	weight	numbers		
Trachurus trecae	470.50	7420	66.42	380
Pagellus bellottii	57.6	2 410	8.13	381
Boops boops	42.00		5.94	
Sepia sp.	34.64		4.89	
Sparus caeruleostictus	33.41		4.73	
Chelidonichthys capensis	12.1		1.72	
Citharus linguatula	9.1		1.20	
Uranoscopus polli	9.1		1.28	
Zeus faber	8.8		1.25	
Dantex congoensis	8.2		1.16	
Spicara alta	7.64		1.08	
Scomberomorus tritor	4.1		0.58	
Chaetodon hoefleri	2.5		0.35	
Dentex angolensis	2.5		0.35	
Engraulis encrasicolus	1.54		0.22	
Lophiodes sp.	1.40		0.21	
Lepidotrigla cadmani	1.10		0.16	
CONGRIDAE	1.0		0.14	
Chlorophthalmus atlanticus	0.3		0.04	
Zenopsis conchifer	0.3		0.04	
Illex coindetii	0.1	160	0.02	
Total	708.4	5	99.99	

			OJECT STATI	MI 186
DATE: 12/ 9/94 GEAL	TYPE: BT No			\$ 955
		16 1051		
				E 1258
	(min) Purpos		3	
LOG :6230.80 6232.30 1.50	Area c		2	
FDEPTH: 25 57		nd. c.de:		
BDEPTH: 25. 57		ty code:		
Towing dir: 360° Wire o	out: 100 m S	peed: 30	kn*10	
Sorted: 39 Kg Total cat	tch: 48.9	4 CATO	H/HOUR1	97.88
SPECIES	CATCH Weight	/HOUR	OF TOT. C	SAMP
Trachurus trecae	79.26	1502	80.98	382
Pagellus bellottii	7.58	50	7.74	383
	6.26		6.40	363
Sepia sp.		12		
Raja miraletus	2.22	2	2.27	
Sphyraena guachancho	0.90	2	0.92	
Brachydeuterus auritus	0.58	6	0.59	
Zeus faber	0.58	2	0.59	
Dentex canariensis	0.32	6	0.33	
Trichiurus lepturus	0.10	8	0.10	
Citherus lingustula	0.06	2	0.06	
Saurida braziliensis	0.02	8	0.02	
Total	97.88		100.00	

			PRO	ECT STATIO	N: 187
DATE:12/ 9/94	GEAR TY	PEI BT Not6	POSITI	ON:Lat S	924
start stop	duration			Long Z	130
TIME :14:21:00 14:51:	00 30 (min) Purpose	code: 3		
LOG 16254.80 6256.3		Area cod	• 12		
FDEPTH: 13 1	2	GearCond	. code :		
BOEPTH: 13 1		Validity	code: 1		
Towing dir: 160	Wire out:	105 m Spe	ed: 30 kr	*10	
Sorted: Kg	fotal catchi	204.46	CATCH	HOUR: 4	08.92
SPECIES		CATCH/H	OUR 1	OF TOT. C	SAH
		weight n	unio e co		
Sepia officinalis hierredd	μ	395.00	210	96.60	
Dentex Canariansis		4.96	8	1.21	38-
Lagocephalus laevigatus		2.90	2	9,71	
Cynoglossus browni		2.12	2	0.52	
Dentex barnardi		1.12	2	0.27	
Pagellus bellottii		0.94	2	0.23	
Epinephelus goreensis		0.62	4	0.15	
Trachinus armatus		0.56	8	D. 14	
Selene dorsalis		0.44	2	0.11	
Trachinus gransus		0.26	2	0.06	

Total

408.92

100.00

		PR	OJECT STATIO	N: 188
DATE: 12/ 9/94 GEAR T	YPE: BT NO	:6 POSI	TION:Lat S	923
start stop duration			Long #	1254
TIME :16:25:00 16:55:00 30 (mi	n) Purpos	e code:	3 .	
LOG :6268.10 6270.40 1.60	Area c	ode :	2	
FDEPTH: 67 68	GearCo	nd.code:		
BDEPTH: 57 68	Validi	ty code:	1	
Towing dir: 330" Wire out	215 m S	peed: 32	kn*10	
Sorted: 92 Kg Total catch	: 1226.4	9 CATC	H/HOUR: 24	52.98
SPECIES			OF TOT, C	SAMP
	weight	numbers		
Trachurus trecae	1844.88	3892	75.21	386
Pagellus bellottii	297.26	1280	12.12	385
Branchiostegus semifasciatus	94.38	80	3.85	
Brachydeuterus auritus	80.24	426	3.27	
Scomber japonicus	39.72	54	1.62	
Trichiurus lepturus	26.66	26	1.09	
Zeus faber	16.52	54	0.67	
Brotula barbata	11.74	54	0.48	
Sepia officinalis hierredda	10.66	26	0.43	
Chelidonichthys capensis	9.06	54	0.37	
Alloteuthis africana	8.00	2266	0.33	
Umbrina canariensis	4.80	54	9,20	
Citherus linguatula	4.80	134	9,20	
Denter canariensis	2.40	26	0.10	
Dentex angolensis	1.86	26	0.08	
Total	2452.98		100.02	

DATE:12/ 9/94	EAR TYPE: BT		NOJECT STATI	DN: 189 5 924
	tion	H010 204		B 1247
TIME :17:55:00 10:25:00 30		ose code:		
LOG :6270.10 6279.30 1.7			2	
FORPTH: 113 110		Cond.code:	•	
BDEPTH: 113 110		dity code:	1	
Towing dir: 160° Wir				
totting ditty 100 bit	a oaan 370 m	opted: 57		
Sortedi 62 Kg Total	catch: 531	.52 CAT	TH/HOUR: 1	063.04
SPECIES		CH/HOUR	N OF TOT. C	SAMP
	weight			
Synagrops microlepis	374.0			
Denter macrophthalmus	170.0		15.99	387
Brotula barbata	120.7		11.35	
Umbrina canariensis	97.7		9.19	
Chelidonichthys capensis	71.4		6.72	
Scorpaena angolansis	43.3		4.08	
Trachurus trecae	30.7			
Dentex Angolensis	28.0			
Miracorvina angolensis	26.3			
Boobs poobs	20.7		1,95	
Pterothrissus belloci	16.8		1,58	
Trichiurus lepturus	14.4			
Citherus linguatule	10.9		0.99	
Zeus faber	10.2		0.96	
Spicare alta	6.2			
Zenopsis conchifer	4.2			
Serranus Cabrilla	3.0			
Peristedion cetaphractum	3.0		0.29	
Uranoscopus polli	2.3			
filex coindetii	2.2			
Anthias enthies	2.0			
SOLEIDAE	1.5			
Lophiodes sp.	1.3			
Dicologoglossa hexophthalma	1.1			
Merluccius polli	1.1	8 34	0.11	
Total	1063.5	6	100.04	

DATE:12/ 9/94 stert stop d	GEAR TYPE: uration	BT No:		IBCT STATIO ION:Lat S Long S	925
			code: 3	40/14 B	
		Area co			
		GaarCon			
BOXPTH: 290 294			y code: 1		
Towing dir: 340*	Wire out: 90	va sp	eedi Ju Ki	1-10	
Sorted: 60 Kg Tot	al catch:	234.89	CATCE	/190U7t) 6	12.76
SPECIES		CATCH/	HOUR 1	OF TOT. C	SAMP
			nusibers		
Chlerophthalmus atlanticus		37.35	\$747	71.37	
Centrophorus granulosus		68.87	18	11.24	
Merluccius polli		43.30	99	7.07	388
HACROURIDAE		18.63	321	3.04	
Gephycoberys darwini		15.52	29	2.53	
Raja miraletus		7,20	10	1.10	
Leemonema laureysi		6,13	175	1.11	
Gervon maritae		5.37	18	0.8\$	
Illex coindetii		1.90	18	0.31	
Pterothriggus belloci		1.64	10	0.27	
Solenocera africana		1,10	230	0.1#	
MORIDAE		0.99	29	0.16	
Synagrops microlepis		0.11	37	0.13	
Citherus linguatula		0.11	18	0.13	
LOPHIIDAE		0.73	29	0.12	
Aristeus varidens		0.63	201	0.10	
CYNOGLOSSIDAE		0.44	10	0.07	
Trichiurus lepturus		0.37	10	0,06	
Scorpaena angolensis		0.26	10	0.04	
Total		12.75		99.99	

			ECT STATIC	
	PZI BT No:6	POSITI		
start stop duration			Long I	5 1239
TIME :22:18:00 22:37:00 19 (mir	 Purpose C Area code 			
LOG :6299.90 6300.90 1.00 FDEPTH: 360 320	GearCond.			
	Validity			
Towing dir: 350° Wire out:	1150 m Spee	G: 30 KN	-10	
Sortad: 60 Kg Total catch:	\$3.89	CATCH/	Houri	264.92
5PEC1E5	CATCH/H	WR V	or tot. C	SAMP
	weight nu	unios ca		
Merluccius polli	92.37	202	34.87	393
Lesbonens laureysi	56.59	960	21.36	
MACROURIDAE	30.51	707	11.52	
Lophiodes sp.	29.81		11.25	
Schedophilus huttoni	8.15	9	3.00	
LOPHIIDAE	7.55	76	2.85	
Pterothrissus belloci	7.07	32	2.67	
Trichiurus lepturus	6.41	69	2.42	
Parapengeus longirostris, fem.	5.10	666	1,96	390
Gephyroberyx darwini	4.33	9	1.63	
Iller coindetii	3.95	35	1,49	
Geryon maritae	2.65	22	1.00	
Chlorophthaimus atlanticus	2.21	54	0,83	
TRIGLIDAS	1.64	3	0.62	
Aristeus varidens, female	1.52	212	0.57	392
Zenopsis conchifer	1.45	9	0.55	
Solenocera africana	1.23	224	0.46	
GONOSTONATIDAE	0.08	22	0,33	
Aristeus varidens, male	0.63	\$2	0.24	391
Epigonus telescopus	0.41	3	0.15	
Feristedion cataphractum	0.25	3	0.09	
Parapenaeus longirostris, male	0.13	25	0.05	389
Total -	264.92		99.99	

		PI	NOJECT STAT	TION: 192
DATE: 13/ 9/94 GEAR 1	YPE: BT NO	16 POST	TION:Lat	5 921
start stop duration			Long	E 123
	n) Purpos	e code:	3	
LOG :6308.80 6310.40 1.60	Ares C	ode r	2	
FDEPTH: 549 552	GaarCo	nd.codet		
BOEPTH: 549 552	Validi	ty code:	1	
Towing dir: 350' Wire out	:1600 m S	peed: 32	kn*10	
Sorted: 26 Kg Total catc)	h: 157.0	2 CAT	H/HOUR:	314.04
SPRCIES		/HOUR	1 OF TOT.	C SANG
	weight	umpeta		
Hoplostethus cadenati	104.64	3576		
MACROURIDAE	59.40	1800		
Marluccius polli	40.20	72	12.8	
GONOSTOMATIDAE	27.60			
Numatocarcinus africanus	17.40			
Scyllarides herklotsii	14.40	1092		
Aristeus varidens, female	11.28	576		
Garyon maritae	11.16	36		
Aristeus varidens, male	10.56			
Etmopterus spinax	9,72	12		
Todaropsis eblanas	5,76	36		
PORTUNIDAE	1,0\$	12		
Trichiurus lepturus	0,84	36	0.2	7
Total	314.04		99.9	9

DATE: 13/ 9/94 GEAR	TYPE: BT No:6	PROJ	ECT STATIO	N: 193 946
start stop duration TIME 105:27:00 05:57:00 30 (m			Long E	
LOG :6342.10 6343.60 1.50	Area code	1 2		
FDEPTH: 454 445 BDEPTH: 454 445	GearCond. Validity			
Towing dir: 170° Wire ou	t:1350 m Spee	d: 30 km	10	
Sorted: 55 Kg Total cate	:h: 177.14	CATCH/	HOUR: 3	54.28
SPECIES	CATCH/HO weight nu		OF TOT. C	SAMP
Merluccius polli	129.60	384	36.58	399
Laemonema laureysi GOBIIDAE	58.80 42.00	672 22614	16.60	
Centrophorus granulosus Aristeus varidens, female	23.80 21.90	8 928	6.72 6.18	397
GONOSTOMATIDAE	16.68	354	4.71	551
MACROURIDAE Illex coindetii	13.44 12.36	210 90	3.79 3.49	
Aristeus veridens, male S H A R K S	11.16 7.38	996 120	3.15 2.08	398
Schedophilus huttoni Hoplostethus cadenati	5.34	24	1.51	
Geryon maritae	5.04	120 18	1.42	
LOPHIIDAE Glyphus marsupialis	0.96 0.66	24 18	0.27	
Scyllarides herklotsii	0.60	60	0.17	
Total	354.28		100.01	
		PROJ	ECT STATIO	
DATE:13/ 9/94 GEAR start stop duration	TYPE: BT No:6	POSITI	ON:Lat S Long E	946
TIME :07:14:00 07:25:00 11 (m	un) Purpose c		song B	1241
LOG :6348.70 6349.30 0.60 FDEPTH: 322 358	Area code GearCond.			
BDEPTH: 322 358 Towing dir: 350° Wire ou	Validity	code: 1	10	
	-			
Sorted: 69 Kg Total cate	:h: 243.50	CATCH/	HOUR: 13	28.18
PECIES	CATCH/HO		огтот. с	SAMP
	weight nu	mbers		JANE
Chlorophthalmus atlanticus Sephyroberyx darwini	380.89 292.09	6873 344	28.68 21.99	
Merluccius polli Deepwater fish mixture	160.36	649	12.07	400
terothrissus belloci	80.18 79.42	382	6.04 5.98	
Centrophorus granulosus Laemonema laureysi	78.27 42.22	16 878	5.89 3.18	
frichiurus lepturus	34.36	382	2.59	
Parapenaeus longirostris, fem. 4ACROURIDAE	34.20 31.15	3147 436	2.57 2.35	401
Parapenaeus longirostris, male Synagrops microlepis	23.13 19.69	1969 458	1.74	402
pigonus telescopus	17.18 9.76	115	1.29	
Priscanthus arenatus Illex coindetii	9.16	16 16	0.73	
Geryon maritae LOPHIIDAE	9.00 8.78	38 55	0.68	
ioplostethus cadenati	8.24	16	0.62	
Scorpaena angolensis	8.24	16	0.62	
otal	1326.32	-	99.85	
DATE: 13/ 9/94 GEAR	TYPE: BT No:6		ECT STATIO DN:Lat S	
start stop duration TIME :08:29:00 08:48:00 19 (m			Long E	1249
LOG :6353.00 6353,90 0,90	Area code	: 2		
FDEPTH: 259 255 BDEPTH: 259 255	GearCond. Validity			
Towing dir: 160° Wire ou	t: 750 m Speed	d: 30 km	10	
Sorted: 34 Kg Total cate	h: 205,56	CATCH/I	HOUR: 6	49.14
SPECIES	CATCH/HO		OF TOT. C	SAMP
OBIIDAE	130.74 1	mbers 00554	20.14	
richiurus lepturus Ynagrops microlepis	114.63 79.01	1762 2046	17.66	
erluccius polli	71.05	246	10.95	
arapenaeus longirostris, fem. Arapenaeus longirostris, male	51.47 37.14	6878 6297	7.93 5.72	403 404
chlorophthalmus atlanticus Sephyroberyx darwini	28.61 23.49	379 19	4.41 3.62	
Dentex angolensis	22.36	57	3.44	
Sembrops heterurus (ACROURIDAE	22.17 19.89	133 189	3.42 3.06	
eterothrissus belloci Senopsis conchifer	17.43 7.96	57 38	2.69	
Spigonus telescopus	7.89	19	1.23	
Merluccius polli, juveniles Sepia sp.	7.58 3.79	76 19	1.17	
CYNOGLOSSIDAE	1.89	76	0.29	
Illex coindetii	1.52	19	0.23	
	610 60	-		

Total

99.93

		PROJECT	STATION: 19	6
DATE:13/9/94 GEAR TY start stop duration	PE: BT No:	6 POSI	TION:Lat S Long E	
TIME :09:47:00 10:22:00 35 (mir			3	
LOG :6357.90 6359.60 1.70 FDEPTH: 147 177	Area con GearCom		2	
BDEPTH: 147 177		y code:	1	
Towing dir: 170° Wire out:	450 m Spe	ad: 28 1	tn*10	
Sorted: 94 Kg Total catch:	316.07	CATC	E/BOUR: 5	41.83
SPECIES	CATCH/I		ог тот. с	SAMP
Dentex macrophthalmus	weight 1 162.07	nua.xers 679	29.91	406
Illem coindetii	92.19	1558	17.01	
Dentex angolensis	65.37	182	12.06	405
Synagrops microlepis Trachurus trecae	59.37 57.38	3156 115	10.96 10.59	407
Spicara alta	23.69	120	4.37	407
Squatina oculata	11.88	39	2.19	
Zenopsis conchifer	9.87	29	1.82	
Brotula barbata Trichiurus lepturus	9.48 7.42	5 22	1.75 1.37	
Pterothrissus belloci	6.39	34	1.18	
Bembrops heterurus	6.22	69	1.15	
Raja miraletus Scomberomorus tritor	6.10 6.05	17	1.13	
Scomperomorus critor Branchiostegus semifasciatus	4.34	22 5	1.12	
Sparus caeruleostictus	3.99	5	0.74	
Zeus faber	3.60	10	0.66	
Chelidonichthys capensis	1.59	10	0.29	
Uranoscopus polli Cynoglossus sp.	1.49	10 57	0.27 0.24	
Scyliochinus stellaris	0.01	5	0.15	
Scorpaena angolensis	0.81	10	0.15	
Peristedion cataphractum	0.39	10	0.07	
Total	541.82		99.98	
		PB		N+ 197
	PE: BT Not	PR/ 6 P051	DJECT STATIO	948
start stop duration		6 POSI	FION:Lat 5 Long E	948
start stop duration TIME :11:19:00 11:29:00 10 (min) Purpose	6 POSI	FION:Lat 5 Long E 3	948
start stop duration TIME :11:19:00 11:29:00 10 (min LOG :6364.30 6364.80 0.50 FDEPTH: 112 111) Purpose	6 POSI: code: : de : :	FION:Lat 5 Long E 3	948
start stop duration TIME 11119:00 11:29:00 10 (min LOG :6364.30 6364.80 0.50 FDEPTH: 112 111 BDEPTH: 112 111) Purpose Area co GearCon Validity	6 POSI code: de : d.code: y code:	FICN:Lat 5 Long E 3 2	948
start stop duration TIME 11119:00 11:29:00 10 (min LOG :6364.30 6364.80 0.50 FDEPTH: 112 111 BDEPTH: 112 111) Purpose Area con GearCond	6 POSI code: de : d.code: y code:	FICN:Lat 5 Long E 3 2	948
start stop duration TIME 11119100 11299100 10 (min LOG :6364.30 6364.80 0.50 FDEPTH: 112 111 BDEPTH: 112 111) Purpose Area con GearCon Validity 360 m Spe	6 POSI code: : de : : d.code: : y code: : aed: 30]	FION:Lat 5 Long E 3 2 1 tn*10	948
start stop duration THME 11119100 1129100 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 BDEFTH: 112 111 Towing dir: * Vire out:) Purpose Area con GearCon Validity 360 m Spo 239.78 CATCH/I	6 POSI code: 2 de 2 d.code: 3 d.code: 3	FION:Lat 5 Long E 3 2 1 tn*10	948 1254
start stop duration TIME 11119100 1129100 10 LOG :6364.30 6364.80 0.50 FORETRI 111 111 BDEPTRI 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch:) Purpose Area con GearCon Validit; 360 m Spo 239.78 CATCH/I Weight I	6 POSI code: : de : : d.code: : d.code: : y.code: : ed: 30 i CATCI HOUR : humbers	FION:Lat 5 Long E 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68 SAMP
start stop duration THE 11119100 1123100 10 (min LOG :6364.30 6364.80 0.50 FOEFTH: 112 111 BOEFTH: 112 111 Towing dir: * Vire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae	 Purpose Area con GearCond Validity 360 m Spe 239.78 CATCH/I Weight I \$67.30 	6 POSI de 2 d.code: d.code: y code: aed: 30 l CATCI HOUR 1 numbers 6216	TION:Lat 5 Long E 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68
start stop duration THE :11:19:00 11:29:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 BDEFTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias) Purpose Area cou GearConu Validit 360 m Spd 239.78 CATCH/1 Weight 1 \$67.30 141.78 85.08	6 POSI code: : de : : d. code: : y code: : y code: : aed: 30 l CATCI HOUR 1 humbers 6216 1074 42	FION:Lat 5 Long E 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68 SAMP 410
start stop duration THE 11139:00 1129:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 DDEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentes angolennis	Purpose Area con GearCon Validit 360 m Spd 239.78 CATCH/I Weight 1 867.30 141.78 85.08 62.55	6 POSI: code: : de : : d.code: y code: : ed: 30 i CATCI HOUR 1 humbers 6216 1074 42 210	FION:Lat 5 Long E 3 2 1 1 H/HOUR: 14: & OF TOT. C 60.28 9.85 5.91 4.35	948 1254 38.68 SAMP 410 408
start stop duration THE 11139:00 11:23:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 BDEFTH: 112 111 Towing dir: * Vire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenopsis conchifer Dentex angolansis Dentex angolansis Dentex acrophthalmus) Purpose Area co GearCom Validit 360 m Spd 239.78 CATCH/I Veight 1 867.30 141.78 85.08 62.58 50.40	5 Posi: code: : d. code: : y code: : y code: : y code: : CATCI HOUR 1 humbers 6216 1074 42 210 192	FION:Lat 3 Jung E Lint10 H/HOUR: 14: & OF TOT. C 60.28 5.91 4.35 3.50	948 1254 38.68 SAMP 410 408 409
start stop duration THE 1113900 1123900 10 (min LOG :6364.30 6364.80 0.50 FOEFH: 112 111 BOEFH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macjolansis Dentex macjolansis Dentex macjolansis) Purpose Area co GearCom Validit 360 m Spi 239.78 CATCH/I veight 1 \$67.30 141.78 \$5.08 62.58 50.40 43.09	6 POSI: code: : d.code: : d.code: : code: :	FION:Lat 3 Long E Long E C C C C C C C C C C C C C	948 1254 38.68 SAMP 410 408
start stop duration TIME 11119100 1129100 10 (min LOG :6364.30 6364.80 0.50 FOEFTH: 112 111 BOEFTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macjolansis Dentex macjolansis) Purpose Area co GearCom Validit 360 m Spe 239.78 CATCH/I veight i 867.30 141.78 85.08 62.58 50.40 43.09 40.20 34.25	6 POSI: code: : d. code: : d. code: : sed: 30 l CATCI HOUR 1 numbers 6216 1074 42 2100 192 192 6 16200 16200 1620 16200 16200 16200 16200 16200 16200	FION:Lat 3 Jung E Lint10 H/HOUR: 14: & OF TOT. C 60.28 5.91 4.35 3.50	948 1254 38.68 SAMP 410 408 409
start stop duration THE 11139:00 10 (min LOG :6364.30 6364.80 0.50 FDEPTH: 112 111 BDEFTH: 112 111 Towing dir: * Vire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zanoppis conchifer Dentex angolensis Dentex macrophthalmus Scomber japonicus Epinephelus aeneus Boops boops Raja miraletus) Purpose Area co GearCon Validit; 360 m Spe 239.78 CATCH/1 veight 1 867.30 141.78 85.08 62.58 50.40 43.08 40.20 34.26 21.84	6 POSI: code: : d. code: : d. code: : d. code: : ed: 30 1 CATCI HOUR 16 1074 42 210 192 192 6 1620 42	FION:Lat 3 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68 SAMP 410 408 409
start stop duration THE 1113900 1123900 10 (min LOG :6364.30 6364.80 0.50 FOEFH: 112 111 BDEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macjolansis Dentex macjolansis Differences Raja miraletus Illex condetii) Purpose Area co GearCom Validit 360 m Spi 239.78 CATCH/I 867.30 141.78 85.08 62.58 50.40 43.08 40.20 34.26 21.84 19.98	6 POSI: code: : de :	FION:Lat 3 Long E Long E L L L L L L L L L L L L L	948 1254 38.68 SAMP 410 408 409
start stop duration THE 11139:00 1129:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 DOEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex maclennis Dentex maclennis Dentex maclennis Dentex maclennis Dentex maclennis Doeps boops Raja miraletus Tilex condetii Dentex congennis Todarcomis eblanee) Purpose Area com GearCom Validit; 360 m Spi 239.78 CATCH/1 veight i 867.30 141.78 85.08 62.58 50.40 43.09 40.20 34.26 21.84 19.98	6 POSI: code: : d. code: : d. code: : d. code: : ed: 30 1 CATCI HOUR 16 1074 42 210 192 192 6 1620 42	FION:Lat 3 3 2 1 1 1 1 1 4/HOUR: 14: 4 OF TOT. C 60.28 9.85 5.91 4.35 3.50 2.99 2.38 1.52 1.39 1.36	948 1254 38.68 SAMP 410 408 409
start stop duration THE 11139:00 1129:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 DOEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex maclennis Dentex maclennis Dentex maclennis Dentex maclennis Dentex maclennis Doeps boops Raja miraletus Tilex condetii Dentex congennis Todarcomis eblanee	Purpose Area com GearCom/ Validit; 360 m Spi 239.78 CATCH/ 867.30 141.78 85.08 62.58 62.58 62.50 40.20 34.26 419.98 19.56 18.90 16.20	6 POSI: code: : de : : d. code: : y code: : y code: : bed: 30 I CATCI HOUR 1 numbers 6216 1074 422 192 6 16200 16200 1620 16200 16200 16200 16200 16200	FION:Lat 5 3 2 1 1 1 1 1 4/HOUR: 14: 4 OF TOT. C 60.28 9.85 5.91 4.35 3.50 2.99 2.38 1.52 1.36 1.31 1.13	948 1254 38.68 SAMP 410 408 409
start stop duration TIME 11119100 1129100 10 (min LOG :6364.30 6364.80 0.50 FOEFTH: 112 111 DOEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macjolansis Dentex macjolansis Dentex macjolansis Socmber japonicus Epinephalus aensus Boops boops Raja miraletus Illex condetii Dentex congoensis Todaropsis eblanse Argyrosomus hololepidotus Citharus linguatula	Purpose Area con GearComy Validit 360 m Spi 239,78 CATCH/V veight 1 807,30 141,78 55,08 62,58 50,40 43,08 40,20 34,26 21,84 19,98 18,90 16,20 5,46	6 POSI: code:	FION:Lat 3 Long E Long E Long C Long E Long C H/HOUR: 14: A OF TOT. C 60.28 9.85 3.50 2.99 2.79 2.79 2.79 2.79 2.79 2.79 1.35 1.52 1.39 1.36 1.31 1.13 0.38	948 1254 38.68 SAMP 410 408 409
start stop duration THE 11139:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 BDEFTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macrophthalmus Scomber japonicus Bongs boogs Boogs boogs Bojes boogs Bojes boogs Bijnephelus aeneus Boogs boogs Rajs micaletus Iller coindetii Dentex conjoensis Todaropsis sblanee Argyrosomus hololepidotus Citharus linguatula Dentex canariensis	Purpose Area com GearConv Validit; 360 m Spi 239.78 CATCH / 857.30 141.78 85.08 62.55 50.40 43.09 40.20 34.26 21.84 40.20 34.26 21.84 9.98 19.56 18.90 16.20 5.46 4.62	6 POSI: code: : ds .:.odet : ds .:.odet : p:code: : sed: 30 1 CATCI HOUR 1 humbers 6216 1074 42 210 192 6 1620 126 294 244 84 244 84 244	FION:Lat 5 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68 SAMP 410 408 409
start stop duration TIME 11119100 1129100 10 (min LOG :6364.30 6364.80 0.50 FOEFTH: 112 111 DOEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macjolansis Dentex macjolansis Dentex macjolansis Socmber japonicus Epinephalus aensus Boops boops Raja miraletus Illex condetii Dentex congoensis Todaropsis eblanse Argyrosomus hololepidotus Citharus linguatula	Purpose Area con GearComy Validit 360 m Spi 239,78 CATCH/V veight 1 807,30 141,78 55,08 62,58 50,40 43,08 40,20 34,26 21,84 19,98 18,90 16,20 5,46	6 POSI: code:	FION:Lat 3 Long E Long E Long C Long E Long C H/HOUR: 14: A OF TOT. C 60.28 9.85 3.50 2.99 2.79 2.79 2.79 2.79 2.79 2.79 1.35 1.52 1.39 1.36 1.31 1.13 0.38	948 1254 38.68 SAMP 410 408 409
start stop duration TIME 11119100 1129100 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 DDEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurs tracae Anthias anthias Zenoppis conchifer Dentex angolansis Dentex macrophthalmus Scomber japonicus Rpinephelus anenus Boops boops Raja miraletus Illex condetii Dentex congoensis Todaropsis sblanes Arsyrosomus hololepidotus Citharus linguatula Dentex canariensis Chelidonichthys gabonensis Microchirus frechtopi) Purpose Area con GearComy Validit 360 m Spi 239.78 CATCH/1 867.30 141.78 85.08 62.59 62.59 62.	6 POSI: code: : d. code: : d. code: : y code: : y code: : code: : code	FION:Lat 3 3 2 1 cn * 10 H/HOUR: 14: 4 OF TOT. C 60.28 9.85 5.91 4.35 5.59 1.39 1.36 1.31 1.13 0.38 0.12	948 1254 38.68 SAMP 410 408 409
start stop duration THE 11139:00 1129:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 BDEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macrophthalmus Socmber japonicus Rpinephalus annus Boops boops Raja miraletus Illex congeensis Todaroppis ablanae Argyrosomus holospidotus Citharus linguatula Dentex rairensis Chalidonichtys gabonensis Microchirus frechtopi Pagellus belottii	Purpose Area con GearConv Validit 360 m Spi 239.78 CATCH/ veight 141.78 85.08 62.58 50.40 40.20 34.26 21.84 19.95 19.56 18.90 16.20 5.46 18.95 16.20 5.46 1.92 1.92 1.92 0.84	6 POST: code : : d. code : : d. code : : d. code : : d. code : : code : : d. code : : d. code : : code : : d. code : : d. c	FION:Lat 5 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68 SAMP 410 408 409
start stop duration TIME 11119100 1129100 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 DDEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurs tracae Anthias anthias Zenoppis conchifer Dentex angolannis Dentex macrophthalmus Scomber japonicus Rpinephelus anenus Boops boops Raja miraletus Illex condetii Dentex congennis Todaropis eblanes Arsyrosomus hololepidotus Citherus linguatula Dentex canariensis Cynglosus canariensis Chelidonichthys gabonennis Microchirus frachopi Pagelus bellottii Spicara alta) Purpose Area con GearComy Validit 360 m Spi 239.78 CATCH/1 867.50 141.78 85.08 62.59 62.59 62.	6 POSI: code: : d. code: : d. code: : y code: : p code: : code: : code	FION:Lat 3 3 2 4 10 14 14 14 14 14 14 14 14 14 14	948 1254 38.68 SAMP 410 408 409
start stop duration THE 11139:00 1129:00 10 (min LOG :6364.30 6364.80 0.50 FDEFTH: 112 111 BDEPTH: 112 111 Towing dir: * Wire out: Sorted: 66 Kg Total catch: SPECIES Trachurus trecae Anthias anthias Zenoppis conchifer Dentex macrophthalmus Socmber japonicus Rpinephalus annus Boops boops Raja miraletus Illex congeensis Todaroppis ablanae Argyrosomus holospidotus Citharus linguatula Dentex rairensis Chalidonichtys gabonensis Microchirus frechtopi Pagellus belottii	Purpose Area con GearConv Validit 360 m Spi 239.78 CATCH/ veight 141.78 85.08 62.58 50.40 40.20 34.26 21.84 19.95 19.56 18.90 16.20 5.46 18.95 16.20 5.46 1.92 1.92 1.92 0.84	5 POST: code 1: d. code 1: d. code 1: y code 1: bed: 30 1 CATCI HOUR 5 1074 42 210 192 6 16206 422 192 6 300 126 294 42 4 4 4 20 6 30 126 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	FION:Lat 5 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1	948 1254 38.68 SAMP 410 408 409

			PI	ROJECT STATI	ON+ 198
DATE:13/ 9/94	GRAR TY	PE: BT Not			5 944
	duration				E 1303
TIME :12:51:00 13:21:00		} Purpose	code:		A 1303
LOG :6374.30 6375.40	1.50	Area co			
FDEPTH: 74 70	1.00	GearCon		•	
BDEPTH: 74 70		Validit		1	
Towing dir: 20°	Mire out.	240 m Sp			
1001119 0111 20	arre outre	240 4 50		an Io	
Sorted: \$5 Kg To	tal catch:	207.66	CATO	CH/HOUR:	415.32
SPECIES		CATCH/		I OF TOT. C	SAMP
			numbers		
Pagellus bellottii		331.56	1860	79.83	414
Trichiurus lepturus		16.08	28	3.87	
Dentex angolensis		15.84	280		413
Trachurus trecae		14.16	168	3.41	412
Squatina oculata		8.00	2	1.93	
Dentex canariensis		6.44	60	1.55	
Octopus vulgaris		5.00	2	1.20	
Epinephelus aeneus		4.48	2	1.08	
Alloteuthis africana		4.42	2040	1.06	
Zeus faber		3.50	10	0.84	
Selene dorsalis		2.20	10	0,53	
Dentex barnardi		1.82	10	0.44	
Chelidonichthys gabonensis		0.94	10		
Umbrina canariensis		0.88	10	0.21	
Total		415.32		99.99	

1438.68

Total

			PR	JECT S	TATIO	1: 199
DATE: 13/ 9/94	GEAR TYP	E: BT No	016 POS	TION:L	at 5	5 94
start stop du	ration			L	ong 1	130
TIME :14:05:00 14:10:00 1	13 (min)	Purpor	e codet	3		
LOG 16378.80 6379.50 0.	70	Area	t ebo:	2		
FDEPTH: 41 41		GearCo	ond.code:	9		
BDEPTH: 41 41		Validi	ty code:	1		
Towing dir: 140° Wi	re out:	150 m 5	peed: 31	kn*10		
Sorted: 160 Kg Total	l catch:	160.0	16 CAT	H/HOUR	ls T	740.58
SPECIES			i/Hour	1 OF T	or. c	SAM
		weight	numbers			
Sericla carpenteri		305.31	55		1.23	41
Dentex Canariensis		168.69			2.78	41
POMACENTRI DAE		94.62			2.78	
Lutjanus goreensis		61.38	60		8.29	41
Zeus faber		27.74	55		3.75	
Rhinobatos albomaculatus		15.92			2.15	
Raja miraletus		10.25	14		1.38	
Lutjanus endecacanthus		9.88	5		1.33	
Dentex gibbosus		9.14	9		1.23	
Acanthurus monroviae		8.31	14		1.12	
Trichiurus lepturus		6.92	9		0.93	
Sarpa salpa		4.80	5		0.65	
Chaetodon hoefleri		4.66	74		0,63	
Pseudupeneus prayensis		2.68	18		0.36	
Fistularia petimba		1.94	9		0.26	
Spondyliosoma cantharus		1.94	5		0.26	
Parapristipoma octolineatum		1.89	18		0.26	
Plectorhinchus mediterraneus		1.66	9		0.22	
Pagellus bellottii		1.29	9		0.17	
Воора Боора		0.60	18		0.08	
Sepia officinalis hierredda		0.55	5		0.07	
Scorpaena stephanica		0.37	9		0.05	
Chaetodon marcellae		0.05	5		0.01	
Total	_	740.59			9.99	

				OJECT STAT	
DATE: 13/ 9/94	GEAR TYPE:	BT No:	6 POSI	TION:Lat	5 94
	uration	-		Long	E 1310
TIME :15:18:00 15:48:00				3	
LOG 16385.80 6387.30	1.50	Area co		2	
FDEPTH: 25 26			nd.code:		
BDEPTH: 25 26			ty code:		
Towing dir: 336	Wire out: 10	l0 na Sp	eed: 30	kn*10	
Sorted: 114 Kg To	tal catch:	114.20	CATC	H/HOUR:	228.40
SPECIES		CATCH		OF TOT.	C SAM
		ight	numbers		
Selene dorsalis	1	21.72	322	53.29	
Trichiurus lepturus		34.60	52	15.19	
Sepia officinalis hierredda		25.50	112	11.10	
Pagellus bellottii		17.32	82	7.56	
Trachurus trecas		9.26	560		
Dentez canariensis		6.26	32	2.74	
Brachydeuterus auritus		4.54	28	1.99	•
Alloteuthis africana		2.08	4160	0.91	1
Panulirus regius		2.00	2	0.98	
Torpedo marmorata		1.84	2	0.81	
Chelidonichthys capensis		1.72	10	0.75	5
Raja mireletus		1.38	2	0.60	0
Pseudupeneus prayensis		0.18	2	0.00	3
Total		228.40		99.99	5

			P	ROJECT STATIC	N: 201
DATE: 14/ 9/94	GEAR TYP	E: BT N	0:6 POS	ITION:Lat	\$ 1002
start stop du	ration			Long 1	1307
	32 (min)	Purpo	se code:		
LOG :6412.60 6414.00 1	. 40	Area		2	
FDEPTH: 14 14		GearC	ond.code:		
BDEPTH: 14 14		Valid	ity code:	1	
Towing dir: 335° W	ire out:				
Sorted: Kg Tota	l catch:	85.	94 CAT	CH/HOUR:	161.14
SPECIES			H/HOUR	N OF TOT. C	SAMP
		weight	numbers		
Sphyraena guachancho		114.47		71.04	420
Sepia officinalis hierredda		9.58			
Rhinobatos albomaculatus		8.16		5.06	
Pseudotolithus typus		7.26			
Trichiurus lepturus		6.54			
Loligo sp.		3.86	4249	2.40	
Pomadasys jubelini		3.06		1.90	
Sardinella aurita		2.33	17	1.45	
Pagellus bellottii		1.80	6	1.12	
Balistes capriscus		1.43	2	0.89	
Alectis alexandrinus		1.07	4	0.66	
Torpedo marmorata		0.62	4	0.38	
Cynoglossus capensis		0.62		0.38	
Chloroscombrus chrysurus		0.21	2	0.13	
Brachydeuterus auritus		0,15	4	0.09	
Total		161.16		100.02	

			OJECT STAT		
	AR TYPE: BT NO	016 POSI	TION:Lat	s	1003
start stop durati			Long	E	1312
TIME :07:50:00 08:20:00 30			3		
LOG 16419.40 6421.30 1.40	Area c		2		
FDEPTH: 52 58		ond.code:			
BDEFTH: 52 58		ty code:			
Towing dir: 170° Wire	out:1502 m 5	peed: 28	kn*10		
Sorted: 91 Kg Total ca	atch: 227.5	0 CATC	H/HOUR:	45	\$.00
SPECIES	CATC	I/BOL.	I OF TOT.	с	SNIP
	weight	numbe r #			
Trachurus trecae	329.76	680	72.47		421
Trichiurus lepturus	38.50	134	8.46		
Synagrops microlepis	23.00	3500	5.05		
Brachydeuterus auritus	21.00	220	4.62		
Raja miraletus	16.30	24	3.58		
Stromateus fiatola	4.40	4	0.97		
Argyrosomus hololepidotus	3.66	14	0.80		
Dentex canariensis	3.26	44	0.72		
Pagellus bellottii	3.16	40	0.69		
Decapterus rhonchus	3.10	4	0.68		
Pomadasys incisus	2.30	24	0.51		
Sardinella aurita	2.10	4	0.46		
Selene dorsalis	1.00	10	0.40		
Chelidonichthys capensis	0.20	4	0.1\$		
Zeus faber	0.76	4	0.17		
Umbrina Canariensis	0.60	10	0.13		
Sepia officinalis hierredda	0.40	10	0.09	•	
Total	454.90		99.98	1	

		PROJEC	STATION: 203
DATE: 14/ 9/94	GEAR TYPE: BT NO	16 POSITION	Lat \$ 1005
	luration		Long E 1306
TIME :09:32:00 09:51:00		a code: 3	
	1.00 Area c		
FDEPTH: 82 80		nd.coder	
BDEPTH: \$2 \$0		ty code: 4	
	Wire out: 250 m S		n
Towing ditt 50	1110 Odci 100 # 3	peed, 20 mi 1	•
Sorted: 63 Kg Tot	al catch: 24996.7	77 CATCH/HO	JR: 78937.17
SPECIES	CATCH	L/HOUR \ OF	TOT. C SAMP
	weight	numbers	
Brachydeuterus auritus	56318.53	554147	71.35 422
Trachurus trecas	20453.69	304424	25.91 423
Atractoscion acquidens	1022.81	1263	1.30
Trichiurus lepturus	\$46.03	6313	1.07
Citherus lingustule	164.15	1263	0.21
Pagellus bellottii	101.02	5049	0.13
Zeus faber	37.89	1263	0.05
Total	78944.12		100.02

PROJECT STATION: 204 DATE:14/ 9/94 GEAR TYEE: B Not6 FOITION:Lat 5 1005 Long # 1154:00 12:24:00 30 (min) Purpose code: 3 Long : 543.80 6445.20 1.40 Area code : 2 THEE: 123 113 Validity code: 1 Towing dir: 20* Wire out: 400 a Speed: 28 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 Species CATCH/HOUR & OF TOT. C SAMP Year out: 400 a Speed: 28 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 Species CATCH/HOUR & OF TOT. C SAMP Year out: 400 a Speed: 28 kn*10 Species CATCH/HOUR & OF TOT. C SAMP Year out: 400 a Speed: 28 kn*10 Species CATCH/HOUR & OF TOT. C SAMP Trachurus tracae 934.18 Species CATCH/HOUR & OF TOT. C SAMP Trachurus tracae 934.18 226.12 Pointo marcophinalaus <th <="" colspan="2" th=""><th></th><th></th><th></th><th></th><th></th></th>	<th></th> <th></th> <th></th> <th></th> <th></th>						
Long B 1256 Long 1 224300 30 (min) Purpose code: 3 Long 1224300 30 (min) Purpose code: 3 Long 1224300 30 (min) Purpose code: 3 PDETH: 123 113 GetCode: 1 Towing dir: 20* Vire out: 400 m Speed: 28 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 2772.04 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 2772.04 SPECIES <			PRC	JECT STATION			
THE 1158400 122400 30 (min) Purpose code: 3 LOG :6443.80 6445.20 1.40 Area code: 12 PDEFTH: 123 113 GearCond.code: 3 BDEFTH: 123 113 Validity code: 1 Towing dir: 207 Vire out: 400 a Speed: 24 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: % OF TOT. C SAMP Umbrine canariensis 679.50 1306 24.51 426 Denter macrophthalmus 661.26 3242 23.13 427 Anthias anthias 226.12 1958 8.16 Denter angolensis 159.30 496 5.75 424 Scomber ignonicus 44.78 180 1.62 Chiddonichthys gabonensis 25.42 202 0.92 Epinephalus goreensis 13.86 12 0.50 Synegrops microlepis 5.18 158 0.19 0.29 5.16 126 126 <th>DATE: 14/ 9/94 GR</th> <th>AR TYPE: BT No</th> <th>16 POSIT</th> <th>ION:Lat 5</th> <th>1005</th>	DATE: 14/ 9/94 GR	AR TYPE: BT No	16 POSIT	ION:Lat 5	1005		
Loc ré43.80 ét45.20 1.40 Arás code i 2 FDEFTH: 123 113 Validity code: 1 BDEFTH: 123 113 Validity code: 1 Towing dir: 20* Vire out: 400 a Special Sorted: 121 Xg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 40° TOT. C SAME Trachurus treczas 934.88 2386 33.73 425 Umbrine canarisanis 679.50 1306 24.51 426 Dentex macrophthalmus 661.26 3242 23.13 427 Anthias anthias 126.12 1958 8.16 427 Bontex angolensis 16.50 20 0.60 59 162 Coblect rigonicus 44.78 180 1.62 428 50 424 Scomber japoincus 5.18 158 0.90 190 190 190 190 190 <td></td> <td></td> <td></td> <td></td> <td>1256</td>					1256		
TORFTH: 123 113 GearCond.code: BDETH: 123 113 Validity.code: 1 Towing dir: 20' Wire out: 400 a Speed: 28 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 00 F OT. C SAMP Trachurus trecae 934.88 2386 33.73 425 Umbrina canariennia 679.50 1306 24.51 426 Denter macrophthalmus 641.26 3242 23.13 437 Anthias anthias 226.12 1958 8.16 Denter angolensis 159.30 496 5.75 424 Scomber ignonicus 44.78 180 1.62 Chelidonichthys gabonensis 25.42 202 0.92 Sparus auriga 13.86 12 0.50 428 5.75 424 Synegrops microlepis 8.10 1912 0.29 70 29 Todaroppis eblanae 5.18 158 </td <td>TIME :11:54:00 12:24:00 30</td> <td></td> <td></td> <td></td> <td></td>	TIME :11:54:00 12:24:00 30						
BDEFTH: 123 113 Validity code: 1 Towing dir: 20* Vire out: 400 m Speci: 28 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 2772.04 Denter macrophthalmus 661:26 SPECIES Denter macrophthalmus 661:26 SPECIES CATCH/HOUR: 2346				2			
Towing dir: 20* Wire out: 400 m Speed: 28 kn*10 Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: 0 F TOT. C SAMP Trachurus trecae 934.88 2386 33.73 425 Umbring canariensis 679.50 1306 24.51 426 Denter macrophthalmus 641.26 3242 23.13 4272.04 Denter macrophthalmus 641.26 334.88 2342 23.13 425 Colspan="2">159.30 44.78 166 Denter angolensis 159.30 426 Chics Stards actic 13.86 12 0.420 5 Denter angolensis 5.18 159 159 24 25 13.86 <td></td> <td></td> <td></td> <td></td> <td></td>							
Sorted: 121 Kg Total catch: 1386.02 CATCH/HOUR: 2772.04 SPECIES CATCH/HOUR: % OF TOT. C SAME Trachurus trecas 934.88 2386 33.73 425 Umbrine camarisensis 69.50 1306 24.51 426 Denter macrophthalmus 641.26 3242 23.13 427 Anthias anthias 226.12 1958 8.16 100 106 24.51 426 Denter macrophthalmus 641.26 3242 23.13 427 106 106 24.51 426 Denter macrophthalmus 641.26 3242 23.13 427 106 106 24.24 23.13 427 Comber impolenzis 25.42 202 0.60 57.55 424 500 106 24.24 20.60 57.55 424 Synegrops microlepis 6.10 1912 0.29 6.01 57.55 428 57.65 1912 0.29 58 58 19 58							
SPECIES CATCH/HOUR top Tot. C SAME umbrine canarismais 934.88 2386 33.73 425 umbrine canarismais 691.50 1306 24.51 426 Dentor macrophthalmus 661.26 3242 23.13 425 Dentor macrophthalmus 661.26 3242 23.13 427 Anthias anthias 226.12 1958 8.16 100 24 Denter angolamsis 159.30 44.78 180 1.62 24 Chelidonichthys gabonensis 26.52 202 0.20 20.60 20.60 Synegrops microlepis 8.10 1912 0.29 428 50 1912 0.29 428 Synegrops microlepis 8.18 180 1.9 24 24 24 24 24 24 24 24 24 24 24 24 24 24 24 236 24 24 33 33 22 0.12 24 24 <td< td=""><td>Towing dir: 20° Wire</td><td>out: 400 a 5</td><td>peed: 2% k</td><td>in*10</td><td></td></td<>	Towing dir: 20° Wire	out: 400 a 5	peed: 2% k	in*10			
Veight numbers Trachurus tracae 934.88 2386 33.73 425 Umbrina canarismais 634.88 2386 33.73 425 Dentes macrophthalmus 631.26 334.83 234.51 426 Dentes macrophthalmus 641.26 3242 23.13 427 Anthias anthias 226.12 1958 8.16 Dentes angolensis 159.30 496 5.75 424 Scomber i sponicus gotennis 25.42 202 0.92 Epinephelus gotennis 16.62 Chelidonichthys gabonensis 25.42 202 0.92 Epinephelus gotennis 13.86 12 0.60 Synagropa microlepis 8.10 1912 0.29 Todaropsis 6.15 5 Sards actiottii 3.40 2 0.12 11er coindetii 2.92 68 0.11 Lepidotrigia carolee 1.36 46 0.05 5 5 5 5 5 5 65 5 5 5 <td>Sorted: 121 Kg Total c</td> <td>atch: 1386.0</td> <td>2 CATCE</td> <td>/HOUR: 277</td> <td>2.04</td>	Sorted: 121 Kg Total c	atch: 1386.0	2 CATCE	/HOUR: 277	2.04		
Trachurus tracas 934.88 2386 33.73 425 Umbrins canarisanis 679.50 1306 24.51 426 Dentex macrophtalmus 641.26 3242 23.13 427 Anthias anthias 266.12 1958 8.16 Dentex angolenzis 159.30 496 5.75 424 Scomber ipponicus 44.78 180 1.62 Chelidonichthys gabonensis 25.42 202 0.92 Epinephalus goreensis 16.80 2 0.60 Synagrops microlepis 8.10 1912 0.29 428 Synagrops microlepis 8.10 1912 0.29 428 57 424 Todaroppis eblanae 5.18 158 0.19 58 58 19 58 58 19 58 58 12 12 20.12 12 12 12 13 33 22 0.12 78 78 13 14 12 22 0.12 12 12 12	SPECIES			OF TOT. C	SAMP		
Umbrine canarismis 679.50 1306 24.51 426 Dentex macrophthalmus 641.26 3242 23.13 427 Anthias anthias 226.12 1958 8.16 1958 8.16 Dentex angolensis 159.30 496 5.75 424 Scomber japonicus 44.78 180 1.62 1916 1916 1916 1916 1916 1916 1917 191							
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Anthias 226.12 1958 8.16 Denter angolensis 159.30 496 5.75 424 Scomber i ponicus 44.78 180 1.62 Chelidonichthys gabonensis 25.42 202 0.92 Epinaphalus goreensis 16.60 2 0.60 Sparus auriga 13.86 12 0.50 428 Synagropa microlepis 6.10 1912 0.29 192 Todaropsis eblanae 5.18 158 0.19 192 128 Pagellus bellottii 3.40 2 0.12 1128 2012 112 Scorpsen anormani 1.12 2.92 68 0.11 118 136 46 0.05 Scorpsen anormani 1.12 2.92 68 0.11 129 120 120 Scorpsen anormani 1.12 2.92 68 0.05 120 120 Scorpsen anormani 1.12 2.0.04 120 120 120 120 <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>							
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Scomber Japonicus 44.78 180 1.62 Chelidonichthys gabonensis 25.42 202 0.92 Epinaphelus goreensis 16.50 2 0.60 Sparus aurige 13.86 12 0.50 428 Synagrops microlepis 8.10 1912 0.29 10 Todaropsis eblanae 5.18 158 0.19 11 12 20 12 Pagellus bellotti 3.40 2 0.12 11 11 12 22 0.01 Scorpesn anormani 1.36 46 0.05 5 5 12 13 13 12 12 12 12 13 12 12 13 13 13 13 13 13 14 12 12 12 12 <							
Chalidonichthys gabonensis 25.42 202 0.92 Epinephelus goreensis 16.50 20.60 Sparus auriga 13.86 12 0.50 Synagropa microlepis 6.10 1912 0.29 Todaroppis 6.10 1912 0.29 Dentex congoensis 4.28 46 0.15 Sards aacda 3.40 2 0.12 Pagellus beliottii 2.92 68 0.11 Lepidotrigia carolee 1.36 46 0.05 Scorpsena normani 1.12 22 0.04 Citharus linguatula 0.68 22 0.02					424		
Epinephelus goreensis 16.50 2 0.60 Sparus auriga 13.86 12 0.50 428 Synegrops microlepis 8.10 1912 0.29 70daropsis 6.10 1912 0.29 Todaropsis eblanae 5.18 154 0.19 0.19 20.29 70daropsis 6.12 110							
Sparus auriga 13.86 12 0.50 428 Synagropa microlepis 8.10 1912 0.29 1042095 0.19 0.19 0.29 1042095 0.19 0.19 0.29 1042095 0.15 1042095 0.15 0.15 0.15 0.12 0.12 0.12 0.12 112 0.102 0.12 112 0.10 112 0.29 0.11 112 0.01 112 0.05 50079806 0.11 112 20.04 0.04 0.15 112 112 0.04 0.11 112 112 0.04 0.04 0.11 112 112 0.04 0.15 113 112 112 111 <td></td> <td></td> <td></td> <td></td> <td></td>							
Synagropa Birolepis 8.10 1912 0.29 Todaropsis 6.18 158 0.19 Denter congeensis 4.28 46 0.15 Sarda sarda 3.40 2 0.12 Pagellus bellottii 3.38 22 0.12 Iller coindetii 2.92 68 0.11 Lepidotrigla carolae 1.36 46 0.05 Scorpesen anormani 1.12 22 0.04 Citherus linguatula 0.66 22 0.02							
Todacopsis eblanae 5.16 158 0.19 Dentsw congoensis 4.28 46 0.15 Sards match 3.40 2 0.12 Pagellus bellottii 3.38 22 0.12 Tilew coindetii 2.92 68 0.11 Lepidotrigia carolae 1.36 46 0.05 Scorpsena normani 1.12 22 0.04 Citherus linguatula 0.68 22 0.02					428		
Dentex congoensis 4.28 46 0.15 Sarda sarda 3.40 2 0.12 Pagellus ballottii 3.38 22 0.12 Iller coindetii 2.92 68 0.11 Lepidotrigla carolae 1.36 46 0.05 Scorpasan normani 1.12 22 0.04 Citharus linguatula 0.68 22 0.02							
Sarda sarda 3.40 2 0.12 Pagellus bellotti 3.38 22 0.12 Iller coindetii 2.92 68 0.11 Lepidotrigla carolae 1.36 46 0.05 Scorpeena normani 1.12 22 0.04 Citherus linguatula 0.68 22 0.02							
Pagellus bellottii 3.35 22 0.12 Iller coindetii 2.92 68 0.11 Lepidotrigla carolae 1.36 46 0.05 Scorpsena normani 1.12 22 0.04 Citharus linguatula 0.68 22 0.02							
Iller coindetii 2.92 68 0.11 Lepidotrigla catolae 1.36 46 0.05 Scorpeena normani 1.12 22 0.04 Citherus linguatula 0.68 22 0.02							
Lepidotrigla carolae 1.36 46 0.05 Scorpsena normani 1.12 22 0.04 Citharus linguatula 0.68 22 0.02							
Scorpsena normani 1.12 22 0.04 Citherus linguatula 0.68 22 0.02							
Citherum linguatula 0.68 22 0.02							
Total 2772.04 100.01	citnerus linguatulă	0.68	22	0.02			
	Total	2772.04		100.01			

		340		
DATE: 14/ 9/96 GEAR T	YPE: BT Note		JECT STATIC	
	IFA: DI NOIC	POSIT	ION:Lat 5	
start stop duration TIME :13:26:00 13:56:00 30 (mi)				1254
LOG 16450.60 1.40 1.40	 n) Purpose Area cod 			
FDEPTH: 193 190	GearCond			
BDEPTH: 193 190				
		code: 1		
Towing dir: 360° Wire out	iouuna spe	ea: 20 K	n- 10	
Sortad: \$6 Kg Total catch	1 395.31	CATCH	/HOUR: 7	90.62
SPECIES	CATCH/H	IOUR L	OF TOT. C	SAMP
	weight n	1020012		
Chlorophthalmus atlanticus	431.60	\$232	54,59	
Dentes macrophthalmus	\$1.04	208	10.25	429
Brotula barbata	46,30	50	5.86	430
Trichiurus lepturus	36.90	84	4.67	
Todaropsis eblanas	34.20	424	4.33	
Merluccius polli	29,62	234	3.75	
Zenopsis conchifer	25.12	130	3.18	
2eus faber	22.42	60	2.84	
Pentheroscion mbiri	15.76	788	1.99	
MACROURI DAS	13.60	486	1.72	
Dentex angolensis	11.44	34	1.45	
Trachurus trecae	10.04	18	1.27	
Pterothrissus belloci	9.36	70	1.10	
Aulopus cadenati	7.36	86	0,93	
Parapenaeus longirostris, fem.	4.24	650	0.54	432
Torpedo marmorata	3.82	8	0.45	
Parapenaeus longirostris, male	2.26	434	0.29	431
Spicere alta	2.26	8	0.29	
Scomber japonicus	1.38	8	0.17	
Uranoscopus cadenati	0.96	8	0.12	
Uranoscopus polli	0.60	8	0.04	
Citherus linguatula	0.34	26	0.04	
Total	790.62		100.02	

		FRO	JECT STATIO	N: 206
DATE: 14/ 9/94 GEAR	TYPE: BT NO	16 POSIT	ION:Lat S	1003
start stop duration	1		Long E	1252
TIME :14:48:00 15:00:00 12 ()	tin) Purpos	e code: 3		
LOG :6454.30 6454.90 0.60	Area c	ode : 2		
FDEPTH: 268 268	GearCo	nd.code: 9		
BDEPTH: 268 268	Validi	ty code: 1		
Towing dir: 150" Wire ou	it: 750 m S	peed: 32 k	n*10	
Sorted: 34 Kg Total cate	:h: 340.7	-		
Sorted: 34 Kg Total cate	n: 340./	S CATCH	/HOUR: 17	03.75
SPECIES	CATCH	HOUR 1	OF TOT. C	SAMP
	weight	numbers		
Chlorophthalmus atlanticus	920.00	16100	54.00	
Pentheropcion mbizi	250.00			
	250,00	9300	14,67	
Trichiurus lepturus	247.50		14,67	
Trichiurus lepturus Diaphus sp.		500		
Trichiurus lepturus Diaphus sp. Pterothrissus belloci	247.50	500 89400	14.53	
Trichiurus lepturus Disphus sp. Pterothrissus belloci Todaropsis eblanse	247.50 215.00	500 89400 250	14.53	
Trichiurus lepturus Disphum sp. Pterothrissus belloci Toderopsis eblense Perepenaeus longirostris, fem.	247.50 215.00 51.00	500 89400 250 300	14.53 12,62 2,99	434
Trichiurus lepturus Diaphus sp. Pterothrissus belloci Toderopsis eblense Parapaneaus longirostris, fem. Parapaneaus longirostris, male	247.50 215.00 51.00 15.00	500 89400 250 300 325	14.53 12.62 2.99 0.48	
Trichiurus lepturus Disphum sp. Pterothrissus belloci Toderopsis eblense Perepenaeus longirostris, fem.	247.50 215.00 51.00 15.00 2.50	500 89400 250 300 325	14.53 12.62 2.99 0.88 0.15	434 433
Trichiurus lepturus Diaphus sp. Pterothrissus belloci Toderopsis eblense Parapaneaus longirostris, fem. Parapaneaus longirostris, male	247.50 215.00 51.00 15.00 2.50 2.25	500 89400 250 300 325 375	14.53 12.62 2.99 0.88 0.15 0.13	

		PR	JECT STAT	TON: 207
DATE:14/ 9/94 GEAR	TYPE: BT No		IONILAT	S 1006
start stop duration			Long	R 1252
	in) Purpos	e code: :		
LOG :6461.10 6462.00 1.70	Area c			
FDEPTH: 362 362	GearCo	nd.code:	-	
BDEPTH: 362 362	Validi	ty code:	1	
Towing dir: 350" Wire out	t:1050 m S			
Sorted: 57 Kg Total catc	h: 57.9	5 CATCE	i/Hour:	115.90
SPECIES	CATCH	/HOUR	OF TOT.	C SAMP
	weight	numbers		
HACROURIDAE	36.10	532	31.15	
Merluccius polli	26.10	168	22.52	435
Nematocarcinus africanus	19.90	7462	17.17	
LOPHIIDAE	7.34	124	6.33	
Gephyroberym darwini	7.22	10	6.23	438
Trichiurus lepturus	5.62	58	4.85	
Scorpaena normani	3.04	6	2.62	
CONGRIDAE	2.50	70	2.16	
Pterothrissus belloci	2,30	12	1.98	
Geryon maritae	1.32	2	1,14	
Schedophilus huttoni	0.96	2	0.83	
Cynoponticus ferox	0.82	2	0.71	
Diaphus sp.	0.#0	306	0.69	
Perspenseus longirostris, fem.	0.68	96	0,59	437
CRABS	0.44	12	0.38	
Peristedion cataphractum	0.28	72	0.24	
Parapenseus longirostris, male	0.22	32	0,19	436
Epigonus telescopus	0.16	2	0.14	
CYNOGLOSSIDAE	0.10	6	0.09	
Total	115.90		100.01	

DATE:	147 9	194			a		PEI BT N	~ 6		OJECT TION:		I ON S	: 208 1003
Deritas		tart	-	top	dura			010	1031		Long	-	1250
TIME		23:00					Burno	se coo	***	3 '	Long	-	4490
LOG		59.20		70.8			λετα						
FDEFT		449	**	45				ond.c		•			
BDEPT		449		45				ity co		1			
			ürı			out:1	1350 m						
Sor	ted:	53 F	Cg		Total (atchi	146.	25	CATC	H/HOUI	Nr.	29	2.50
SPECIES								H/HOUI		I OF 1	tot.	с	SAME
							weight						
Merlucciu							53.74		120		18.37		435
Léenonema							48.14		1006		16.40		
Aristeus							34.60		2254	1	11.93		441
Nematocar							29.00		\$670		9.97		
Centropho		ranul	1050	•			26.60		6		9.05		
MACROURI D							24.50		980		8.30		
SHARK							24.00		570		8.21		
Aristeus		ens,	De1	•			14,00		936		4.75		660
Lophi i dae Gonostona							9.30 \$.70		474 290		3.18		
BATRACHOI							4.54		230		2.92		
Iller coi							3,10		26		1.00		
Hoplostet							2.30		#0		0.75		
Scorpeena							1.50		6		0.51		
Trichiutu							1.40		50		0.48		
Zenopsis							1.24		6		0.42		
Schedophi.							0.80		6		0.27		
Epigonus							0.50		ě		0.17		
Glyphus m							0.50		40		0.17		
Geryon ma							0.24		6		0.04		
							292.70			-10	0.00	5	

				T STATIO	N: 209
DATE:14/ 9/94	GEAR TYPE	I BT No:6	POSITION	:Lat 5	1003
start stop	duration			Long E	1245
TIME :20:11:00 20:4	1:00 30 (min)	Purpose of	oder 3		
LOG 16474.00 6475.	40 1.40	Arva code	: 2		
FUEPTH: 553	556	GuarCond.	codes		
BDEPTH: 553	556	Validity (code: 1		
Towing dir: 3	12° Wire out:16	50 m Speed	1: 26 kn*1	0	
Sorted: 58 Kg	Total catch:	106.32	CATCH/HO	UR: 2	12.64
SPECIES		CATCH/HO	UR NOF	тот. с	SAMP
		aight nu	abe ca		
Nerluccius polli		50.40	80	23.\$9	442
Numeton and and africance		28 00	3	** **	

7888 20 100 440 236	13.17 11.47 9.88 9.41 7.28	
100 440	9.88 9.41 7.28	
440	9.41 7.28	
	7.24	
236		
	4.59	
420	3.54	
2916	3.48	
122	3.39	
112	3.24	
36		
120	1.17	444
160	0.55	443
6	0.30	
16	0.23	
	100.03	
	2916 122 112 36 12 16 120 160 4	2916 3.48 122 3.39 112 3.24 36 1.60 12 1.56 16 1.28 120 1.17 160 0.55 4 0.30 16 0.23

			SCT STATION: 210
DATE:14/ 9/94	GEAR TYPE: BT	Note POSITIC	WiLat 5 1002
	duration		Long E 1004
TIME :22:30:00 23:00:	:00 30 (min) Purp	ose code; 3	
LOG 16480.90 6483,	30 1.40 Ares	code : 2	
FDEPTH: 766 7	15 Gear	Cond. code:	
BDEPTH: 766 7'	15 Vali	dity code: 1	
Towing dir: 170	" Wire out:2100 m		10
Sorted: 25 Kg	Total catch: 103	.24 GATCH/2	10UR1 206.48
SPECIES	CAT	CH/HOUR 1	TOT. C SAME
	weight	numbers	
MACROURI DAB	105.0	4 2040	50.87
Trichiumus lentumus	25 6	A 344	12 40

MACKOURI DAS	105.04	2040	50.87	
Trichiurus lepturus	25.60	384	12.40	
OPHIDIIDAE	16.16	168	7.83	
Scyllarides herklotsii	14.16	456	6.86	
NETTASTONATIDAE	11.12	112	5.39	
Geryon macitae	9.04	16	4.30	
Merluccius polli	8.40		4.07	
Ebinania costaecenarie	6.24	16	3.02	
Cephalopholis sp.	2.48	16	1.20	
Hoplostethus cadenati	2.08	48	1.01	
Aristeus varidens	2.00	152	0.97	
GONOSTONATIDAE	1.60	16	0.77	
HALOSAURI DAK	0.88	16	0.43	
OPHICHTHIDAE	0.72	8	0.35	
Glyphus marsupialis	0.72	48	0.35	
Synagrops microlepis	0.24	8	0.12	
Total	206.48		100.02	

		PROJ	ECT STATIO	N+ 21
DATE: 15/ 9/94 GEAL	TYPE: BT No		ONILat 5	
start stop duratio			Long E	
		a code: 3	100119 #	11.0
LOG :6508.80 6510.30 1.50	Area C			
FDEPTH: 536 546		nd.code:		
BDEPTH: 536 546		ty code: 1		
Towing dir: 315° Wire o			*10	
Sorted: 42 Kg Total cat	tch: 304.9	6 CATCH/	HOUR: 6	09.92
PECIES	CATCH	HOUR &	OF TOT. C	SAH
	weight	numbers		
enatocarcinus africanus	436.80	107744	71.62	
ONOSTONATIDAE	66.30	1990	10.87	
terluccius polli	63.20	100	10.36	44
richiurus lepturus	11.70	222	1.92	
tmopterus spinar	7.02	26	1.15	
Scyllarides herklotsii	6.38	598	1.05	
ACROURIDAE	3.64	222	0.60	
eryon maritae	3.00	14	0.49	
loplostethus cadenati	2.74	92	0.45	
risteus varidens, female	2.74	144	0.45	44
OPHI I DAE	2.08	118	0.34	
risteus varidens, male	2.08	300	0.34	44
CONGRIDAE	1.18	78	0.19	
lesiopenaeus edwardsianus	0.66	144	0.11	
asystis pastinaca	0.40	14	0.07	
Total	609.92		100.01	

	PROJECT STATION: 212
DATE: 15/ 9/94 GEAR 1	YPE: BT No:6 POSITION:Lat 5 1023
start stop duration	Long E 1257
	n) Purpose code: 3
LOG :6516.50 6518.00 1.50	Area code : 2
FDEPTH: 452 450	GearCond.code:
BDEPTH: 452 450	Validity code: 1
Towing dir: 330° Wire out	::1350 m Speed: 30 kn*10
Sorted: 40 Kg Total catch	a: 174.01 CATCH/HOUR: 348.02
SPECIES	CATCH/HOUR & OF TOT. C SAMP
	weight numbers 90.30 154 25.95 448
Merluccius polli	68.96 17234 19.81
Nematocarcinus africanus 5 H A R K S	56.70 714 16.29
	43.54 714 12.51
Trichiurus lepturus MACRONRIDAE	33.26 300 9.56
Aristeus varidens, female	25.00 1196 7.18 450
Centrophorus granulosus	9.00 2 2.59
LOPHIIDAS	7.22 174 2.07
EXOCOLUTIDAE	5.26 6 1.51
Iller coindetii	4.90 34 1.41
Aristeus varidens, male	3.92 534 1.13 449
Total	348.06 100.01

DATE:15/9/94 GEAR T start stop duration TIME 106:42:00 07:12:00 30 (mi LOG 16524.20 6525.70 1.50 FDEFTH: 340 349 BDEFTH: 340 349 Towing dir: 320* Wire out	Area cod GearCond Validity	POSITI code: 3 e : 2 .code: code: 1	ECT STATION ON:Lat S Long E	*: 213 1022 1300
Sorted: 53 Kg Total catch	: 186.17	CATCH/	HOUR: 3	72.34
SPECIES	CATCH/H weight n	OUR 1	оғтот.с	SAMP
Merluccius polli	65.80	210	17.67	451
Pterothrissus belloci	61.26	286	16.45	
Chlorophthalmus atlanticus	43.06	1406	11.56	
Parapenaeus longirostris, fem.	34.30	4326	9.21	453
Gephyroberyx darwini	29.82	28	8.01	
Coelorinchus coelorhincus	28.78	2540	7.73	
Miscellaneous fishes	28.70		7.71	
Laemonema laureysi	25.56	398	6.86	
Parapanaeus longirostris, male	18.00	2610	4.83	452
Scorpaena angolensis	17.78	56	4.78	
Geryon maritae	5.68	90	1.53	
Illex coindetii	3.78	48	1.02	
Trichiurus lepturus	2.10	28	0.56	
Trigla lyra	1.90	6 20	0.51	
Epigonus telescopus S H A R K S	1.48	34	0.47	
	1.34		0.40	
Zenopsis conchifer Zenopsis conchifer	1.34	6	0.36	
Zenopsis conchier Raja miraletus	1.34	6	0.36	
UE)E MILETACOS	1.34	0	0.30	
Total	373.78		100.38	

DATE: 15/ 9/94 GEAR TY	PE: BT No:6	PROJ	ECT STATION	1022
start stop duration			Long E	1301
TIME :00:10:00 00:20:00 10 (mir LOG :6529.10 6529.60 0.50	 Purpose Area cod 	code: 3 e :2		
FDEPTH: 237 244	GearCond	.code: 8		
BDEPTH: 237 244 Towing dir: 160* Wire out:	Validity 750 m Spe		10	
Sorted: 28 Kg Total catch:		CATCH/		7.28
SPECIES	CATCH/H weight n	OUR S	OF TOT. C	SAMP
Synagrops microlepis	330,00	13728	48.72	
Chlorophthalmus atlanticus Parapanaeus longirostris, fem.	242.40 30.48	5040 4416	35.79 4.50	455
Parapenaeus longirostris, fem. Parapenaeus longirostris, male	23.76	4200	3.51 1.59	454
Pterothrissus belloci Dentex angolensis	10.80	72 24	1.49	
Dentex macrophthalmus Zenopsis conchifer	7.20	24 24	1.06	
Iller coindetii	4.56	48	0.67	
Bembrops heterurus Scorpaena angolensis	4.08 3.12	48 24	0.60	
Halosaurus sp.	2.16	24 24	0.32	
Geryon maritae 5 H A R K S	1.68	48	0.28	
LOPHI I DAE	0.48	48	0.07	
Total	677.28		99.98	
DATE: 15/ 9/94 GEAR TI	PE: BT Note		ECT STATION	1023
start stop duration			Long E	
TIME :09:40:00 10:10:00 30 (min LOG :6533.50 6535.10 1.60	Area cod	ie 12		
FDEPTH: 195 189	GearCond			
BDEPTH: 195 189 Towing dir: 155* Wire out:	560 a Spe	code: 1 ed: 31 kn	•10	
Sorted: 90 Kg Total catch:	276.84	CATCH/	HOUR: 5!	53.68
	CATCH/F		or tot. c	SAMP
SPECIES	weight r	lunicers		anne
Zenopsis conchifer Spicara alta	112.80	1068 458	20.37 19.51	
Dentex angolensis	62.70	150	11.32	456
Synagrops microlepis Dentex macrophthalmus	62.40 38.10	3600 114	11.27 6.88	457
Erythrocles monodi	34.80	42	6.29 5.52	
Pterothrissus belloci Centrophorus granulosus	30.54 22.20	198	4.01	
Merluccius polli Squatina oculata	19.32 14.40	240	3.49 2.60	
Epinephelus goreensis	13.50	6	2.44	458
Umbrina canariensis Zeus faber	7.20 4.68	12 12	1,30	
Scorpaena angolensis	4.68	12	0.85	
Chlorophthalmus atlanticus Bembrops heterurus	4.26	186 54	0.77	
Illex coindetii	3,36	42 54	0.61 0.52	
Epigonus telescopus Uranoscopus polli	1.44	12	0.26	
SERRANIDAE Parapenaeus longirostris	1.20	6 114	0.22	
Citharus linguatula	0.36	24	0.07	
Total -	553.38		99.98	
DATE:15/ 9/94 GEAR T	YPE: BT No:	PROJ 6 POSITI	ON:Lat S	1024
start stop duration TIME :11:30:00 12:00:00 30 (mi	n) Purnose	code: 3	Long E	1310
LOG 16540.90 6542.40 1.50	Area coo	de 12		
FDEPTH: 110 110 BDEPTH: 110 110	GearCon	y code: 1		
Towing dir: 143° Wire out	: 330 m Spe	ed: 28 kn	*10	
Sorted: 55 Kg Total catch	: 110.40	CATCH/	HOURI 2	20.00
SPECIES	CATCH/I weight	HOUR 1	OF TOT. C	SAMP
Pagellus bellottii	78.20	208	35.42	461
Sparus pagrus africanus Dentex macrophthalmus	25.64 20.32	36 88	11.61 9.20	462 459
Squatina oculata	16.80	12	7.61	
Dentex angolensis Chelidonichthys gabonensis	16.40 9.88	88 64	7.43 4.47	460
Torpedo torpedo	8.12	12	3.68	
Raja miraletus Trichiurus lepturus	7.76	20 4	3.51 2.30	
Todaropsis eblanae Epinephelus goreensis	4.64 3.96	144	2.10 1.79	
Citharus linguatula	3.60	80	1.63	
Zeus faber Zenopsis conchifer	3.24 2.60	12 12	1.47	
Trachurus trecae	2.48 2.32	56	1.12	
Brotula barbata Lepidotrigla carolae	2.28	68	1.03	
Dentex congoensis Chelidonichthys lucerna	1.40	8	0.63	
Synagrops microlepis	1.04	440	0.47	
Iller coindetii Lagocephalus laevigatus	1.00	56 4	0.45	
Uranoscopus polli	0.80	4	0.36	
Peristedion cataphractum Microchirus frechkopi	0.28	4	0.13	
Saurida braziliensis	0.04	8	0.02	
Total	220.80		99.98	

	PROJE	CT STATION: 21
DATE: 15/ 9/94	GEAR TYPE: BT Noi6 POSITIO	N:Lat 5 102
start stop	uration	Long E 1319
TINE :13:38:00 14:08:00	30 (min) Purpose code: 3	,
LOG 16553.30 6554.80	1.50 Area code : 2	
FDKPTH: 80 80	GearCond. code:	
BDEPTH: 80 80	Validity code: 1	
TOWING CILL 62.	Wire out: 240 m Speed: 30 kn*	10
Sortedi 56 Kg To	al catch: 4999.98 CATCH/H	OUR: 9999,96
SPECIES	CATCH/HOUR 1 0	FTOT. C SAN
	weight numbers	
Trichiurus lepturus	4943.96 13872	49.44
Trachurus trecae	3752.42 12804	37.52 463
Svnagrops Microlepis	899.88 160768	9.00
Synagrops Microlepis Brachvdeuterus suritus	899.88 160768 403.70 3556	9.00
Synagrops Microlepis Brachydeuterus suritus	899.88 160768 403.70 3556	9.00 4.04

		bac		
			JECT STATI	
	YPE: BT No:	6 PDS17		5 1023
start stop duration				E 1325
TIME :15:13:00 15:43:00 30 (m1)		code: 3	l .	
LOG :6561.70 6563.20 1.50	Area co	xie :2	1	
FDEPTH: 50 49	GearCon	d.code:		
BDEPTH: 50 49	Validit	y code: 1		
Towing dir: 145* Wire out:	150 a 5p			
Sorted: 8 Kg Total catch	8.73	CATCH	I/HOUR;	17.46
SPECIES	CATCH/		OF TOT. C	SAMP
		numbers		
Merluccius polli	5,30	592	30.36	
Sepia officinalis hierredda	5.06	18	28.98	
Trachurus trecae	4.62	1788	26.46	
Brachydeuterus auritus	0.70	22	4.01	
Torpedo marmorata	0.66	2	3.74	
Dentex cenariensis	0.64	2	3.67	
Scorpanna angolensis	0.48	8	2.75	
Total	17.46		100.01	

	PROJECT S	TATION: 219
DATE: 15/ 9/94 GEAR TY	E: BT No:6 POSITION: La	t S 1024
start stop duration	Lo	mg E 1329
TIME :16:25:00 16:55:00 30 (min)		,
LOG :6566.70 6568.20 1.50	Area coda : 2	
FDEPTH: 20 27	GearCond. code:	
BDEPTH: 28 27	Validity code: 1	
Towing dir: 150° Wire out:		
1002.09 4411 130 4110 OUC.	TOD W SPEED, DO MILTO	
Sorted: 6 Kg Total catch:	6.87 CATCH/HOUR:	13.74
SPECIES	CATCH/HOUR & OF TO	T.C SAMP
	weight numbers	
Arius parkii	7.46 4 54	. 29
Trachurus traces	3.00 114 21	.83
Zpinephelus aensus	1.86 2 13	. 54
Brechydeuterus auritus	0.98 10 7	.13
Scorpaens stephanica	0.20 4 1	.46
CRÀBS	0.18 30 1	.31
Chaetodon marcellae	0.06 2 0	. 44
Total	13.74 100	.00

			21	ROJECT S	LATIO	N: 220
DATE: 16/ 9/94	GEAR TYP	E: BT NO	16 POST	ITION: La	t S	1045
start stop	duration			Lo	ne K	
TIME :06:11:00 06:41:00	30 (min)	Purpos	e code:	3		
LOG 16594.20 6595.40		Area c		2		
FDEPTH: 40 47			nd.code:	-		
BDEPTH: 40 47		Validi	ty code:	1		
Towing dir: 270*	Wire out:	160 m 5	peed: 30	kn*10		
Sorted: Kg To	tal catch:	150,1	0 CAT	CH/HOUR:	3	00.20
SPECIES			/HOUR	I OF TO	t. c	SAMI
		weight	numbers			
Synagrops microlepis		118.00	17700	39	. 31	
Brachydeuterus auritus		75.50	1310	25	.15	
Parapenasopsis atlantica		33.00	19580	10	. 99	
Trachurus trecae		24.00	130	7	99	
Pegusa lascaris		18,10	320	6	.03	
Trichiurus lepturus		14.80	630	4	.93	
Sarda sarda		12.20	10	4	.06	
Pseudotolithus typus		3.10	250	2	.03	
CRABS		1.50	210		50	
Total		300.20		90	99	

		PR	JECT STATI	
DATE:16/ 9/94 GEAR T start stop duration	YPE: BT NOI	6 20511	ION:Lat Long	5 1044 E 1336
TIME :07:32:00 06:02:00 30 (mi				
LOG :6599.80 6601.20 1.40 FDEPTH: 59 51	Area co GearCom	de ti d.codet	2	
BDEPTH: 59 51 Towing dir: 90° Wire out	Validit 200 m Spe	y code:		
Sorted: 31 Kg Total catch	: 195.14	CATC	I/HOUR:	390.28
SPECIES	CATCE/	100170 (OF TOT. C	SAMP
	weight :	numbers		
Trachurus trecae Trachurus trecae, juvenile	234.00 \$4.12	3552 38904	59,96 21,55	664
Torpedo marmorata	29.90	48	7.30	
Brachydeuterus auritus Sepia officinalis hierredda	13.44 10.06	372 24	3.44 2.58	
Spinephelus slexandrinus * Dentex concriensis	7.00	2 49	1.7 9 1.17	
Trichiurus lepturus	3.96	348	1,01	
Pegusa lasceria Thorogobius angolensis	2.64	40 84	0.68	
Scorpanna stephanica	0.36	12	0.09	
Citharus linguatula	0.12	12	0,03	
Total -	390,28		99,99	
DATE:16/9/94 GEAR T start stop duration	YPE: BT Not		JECT STATI ION:Lat Long	
TIME :09:20:00 09:49:00 29 (mi	n) Purpose	code: 3	1	A 1332
LOG :6609.50 6610.90 1.40 FDEPTH: 90 90	Area coo GearCond	de : à d.code:	1	
BDEPTH: 90 90	Validity	code:]		
Towing dir: 140° Wire out:				
Sorted: 98 Kg Total catch	: 1146.81	CATC	I/HOUR: 2	372,71
SPBCIES	CATCH/H		or tot. c	SAMP
Trachurus trecae	weight : 1257.93	4490	\$3.0Z	465
Synagrops microlepis	397.18	111910	16.74	
Dentex canariensis Dentex macrophthelmus	245.07 145.34	579 627	10,33 6,13	467 466
Atractoscion acquidens	133,99	120	5,65	
Trichiurus lepturus Branchiostegus semifasciatus	65.90 50.94	507 48	2.78	
Umbrina Canariensis Torpedo torpedo	32.34 18.83	97 48	1.36	
Pterothrissus belloci	6.99	72	0.29	
Dentex angolensis Scorpaena angolensis	5.07 4.57	48 49	0.21 0.19	
Brotula berbeta	4.10	25	0.17	
Pagellus bellottii Citharus linguatula	2.90	25 25	0.12	
Pegusa lascaris	0.48	25	0.02	
Total	2372.58		99.99	
DATE:16/ 9/94 GEAR T	(PE1 BT Note	PRC	JECT STATI	ON: 223
start stop duration				5 1045 E 1326
TIME :11:02:00 11:32:00 30 (m1: LOG :6618.40 6620.50 1.50	 h) Purpose Area cod 	code: 3 14 ; 2		
FDEPTH: 115 114	GearCond	i.code:		
BDEPTH: 115 114 Towing dir: 310° Wire out:	validity 360 m 5pe	/ code: 1 ed: 32 k	n*10	
Sorted: 94 Kg Total catch:				791.20
SPECIES	CATCH/I	OUR 1	OF TOT. C	SAMP
Trachurus trecae	2416.00	umbers 7640	63.73	468
Dentex macrophthelmus Trichiurus lepturus	1094.00 136.00	5520 1200	28.86 3.59	469
Todaropsis eblanae	24.00	600	0.63	
Umbrine ceneriensis Octopus vulgeris	21.60 19.60	160 40	0.57	
Pagellus bellottii	17.20	210	0.45	
Boops boops Ptersthrissus belloci	13.20	160 120	0.35	
Chelidanichthys gabonensis Citherus linguatula	10.20	80	0.24	
Aulopus cadenati	\$.40 5.20	160 80	0.22 0.14	
Illex coindetii Scorpaena normani	4.40 2.80	400	0.12	
Spicara alta	2.40	40 80	0.07	
Microchirus frechkopi Lepidotrigle carolae	2.00	40	0.05	
Total	3791.20	••	100.00	

3791.20

100.00

Total

		PRO	ECT STATI	ON: 224
DATE:16/ 9/94 GEAR start stop duration	TYPE: BT No:		ON:Lat	
TIME :12:47:00 13:17:00 30 () LOG :6626.90 6628.40 1.50	min) Purpose	code: 3 ie : 2	,	
FDEPTH: 190 189	GearCon	i.code:		
BDEPTH: 190 189 Towing dir: 317° Wire ow	Validity ut: 600 m Spe	/ code: 1 ed: 30 ki	*10	
Sorted: 67 Kg Total cat	ch: 1609.68	CATCH	HOUR: 3	219.36
PECIES	CATCH/I weight	iOUR & numbers	OF TOT. C	SAMP
entheroscion mbizi hlorophthalmus atlanticus	1670.40 780.00	12736 17808	51.89 24.23	
erluccius polli	561,60	8496	17.44	470
enopsis conchifer richiurus lepturus	92.16 63.36	768 960	2.86 1.97	
orpedo torpedo terothrissus belloci	22.08 11.52	48 48	0.69	
odaropsis eblanae	7,20	96	0.22	
arapenaeus longirostris ACROURIDAE	6.24 3.36	1152 144	0.19 0.10	
ulopus cadenati	1.44	48	0.04	
otal	3219.36		99.99	
	TYPE: BT No:			5 1044
start stop duratio TIME :14:20:00 14:50:00 30 ()		code: 3	Long	E 1317
LOG :6631.80 6633.40 1.60 FDEPTH: 244 252	Area co GearCon	ie :2		
BDEPTH: 244 252	Validity	/ code: 1		
	ut: 750 m Spe			
Sorted: 93 Kg Total cat	ch: 1870.00	CATCH	HOUR: 3	740.00
PECIES	CATCH/I	IOUR &	OF TOT. C	SAMP
entheroscion mbizi	weight 1918.00	95920	51.28	
chlorophthalmus atlanticus richiurus lepturus	1688.00	38520	45.13	
umunida squamifera	46.40 27.60	3160	1.24	
enopsis conchifer Perluccius polli	14.80 12.40	160 160	0.40	
arapenaeus longirostris, fem. Pterothrissus belloci	8.00	1320	0.21	472
Aulopus cadenati	6.40	80	0.17	
Parapenaeus longirostris, male (ACROURIDAE	6.00 2.80	1240 200	0.16 0.07	471
ORTUNIDAE Synoglossus canariensis	1.60	40	0.04	
		•0		
fotal	3740.00		99.98	
DATE:16/9/94 GEAR	TYPE: BT No:			s 1046
start stop duratio TIME :16:07:00 16:37:00 30 () LOG :6638.20 6639.90 1.70 FDEPTH: 353 351	n min) Purpose Area co GearCon	6 POSIT code: 3 je : 2 j.code:	ION:Lat	
start stop duratio TIME :16:07:00 16:37:00 30 (; LOG :6638.20 6639.90 1.70	n min) Purpose Area co GearCon Validit	6 POSIT code: 3 je :2 j.code: y code: 1	ION: Lat Long	s 1046
start stop duratio TIME :16:07:00 16:37:00 30 () LOG :6638.20 6639.90 1.70 FORTR: 353 351 BDEPTH: 353 351	n min} Purpose Area co GearCon Validit ut:1050 m Sp	6 POSIT code: 3 de :2 d.code: y code: 1 ded: 33 km	ION: Lat Long h*10	s 1046
start stop duratio TIME :16:07:00 16:37:00 30 () Log :6638.20 6639.90 1.70 FORTH: 353 351 BDETH: 353 351 Towing dir: 140* Vire on Sorted: 4 Kg Total cat	m min) Purpose Area co GearCon Validit ut:1050 m Sp ch: 4.21	6 POSIT code: 3 ie : 2 i.code: y code: 1 bed: 33 ki CATCH	ION: Lat Long h*10 /HOUR:	S 1046 E 1316 8.42
start stop duratio TIME :16:07100 16:37100 30 (; LOG :6638.20 6639.90 1.70 FORPTR: 353 351 BDETR: 353 351 Towing dir: 140° Vire of Sorted: 4 Kg Total cat	n min) Purpose Area co GearCom Validit ut:1050 m Sp ich: 4.21 CATCH// weight	6 POSIT code: 3 ie : 2 i.code: y code: 1 ed: 33 k CATCH HOUR &	ION: Lat Long h*10 /HOUR: OF TOT. C	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (; LOG :6638.20 6639.90 1.70 FDEFTH: 353 351 BDEFTH: 353 351 Towing dir: 140° Wire or Sorted: 4 Kg Total cat SPECIES Frichiurus lepturus Sematocarcinus africanus	n min) Purpose Area co GearCom Validit ut:1050 m Sp ch: 4.21 CATCH// weight 2.24 2.02	6 POSIT code: 3 de : 2 d.code: 2 d.code: 1 y code: 1 wed: 33 ki CATCH HOUR & humbers 6 882	ION: Lat Long *10 /HOUR: OF TOT. C 26.60 23.99	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 BDEFTH: 353 351 Towing dir: 140* Vire on Sorted: 4 Kg Total cat SPECIES Frichlurus lepturus Hematocarcious africanus Miaphus sp.	n min) Purpose Area co GearConn Validit ut:1050 m Sp ch: 4.21 CATCH// veigh 2.24 2.02 1.84	6 POSIT code: 3 de : 2 d.code: 2 d.code: 1 y code: 1 y code: 1 sed: 33 km CATCH HOUR % 6 892 1626 14	ION:Lat Long h*10 /HOUR: OF TOT. C 26.60	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 BDEFTH: 353 351 Towing dir: 140* Wire or Sorted: 4 Kg Total cat SPECIES Trichiurus lepturus Hematocarcinus afficanus Jiaphus sp. 4ACROURIDAE	n min) Purpose Area co GearCon Validit ut:1050 m Sp ch: 4.21 CATCH// weight 2.24 2.02 1.84 1.02 0.64	6 POSIT code: 3 de t 2 d.code: 2 d.code: 1 bed: 33 km CATCH HOUR % Numbers 6 882 1626 14 2	ION: Lat Long /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 Towing dir: 140" Wire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PBCIES Trichiurus lepturus Hematocarcinus afficanus Jiaphus sp. HACROURIDAR Synoponicus ferox *arapenaeus longirostris : R. B S	n min) Purpose GearCon Validit util050 m Sp. cch: 4.21 CATCH// weight 2.24 2.02 1.84 1.02 0.64 0.30 0.12	6 POSIT code: 3 is t 2 i.code: y y code: 1 sed: 33 kn CATCH HOUR & Numbers 6 882 1626 14 2 46 6	ION: Lat Long /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 Towing dir: 140' Vire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PBCIES Trichiurus lepturus Hematocarcinus afficanus Jiaphus sp. ACROURIDAE Ynoponticus ferox arapameus longirostris :Ra a s Start starts	n min) Purpose GearCon Validit util050 m Sp. cch: 4.21 veight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.09	6 POSIT code: 3 is t 2 i.code: 1 y code: 1 heed: 33 k: CATCH HOUR & Numbers 6 892 1626 14 2 6 6 18 12	LON: Let Long *10 /HOUR: 0F TOT. C 26.60 23.99 21.05 12.11 7.60 3.56 1.43 0.95	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 Towing dir: 140' Vire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PBCIES Trichiurus lepturus Hematocarcinus afficanus Jiaphus sp. ACROURIDAE Ynoponticus ferox arapameus longirostris :Ra a s Start starts	n min) Purpose GearCon Validit ut:1050 m Spr cch: 4.21 CATCH// Weight 2.24 2.02 1.84 1.02 0.64 0.30 0.12	6 POSIT code: 3 is t 2 i.code: 1 y code: 1 y code: 1 x code: 3 x code: 4 y code: 1 sed: 33 kr CATCH HOUR & 6 892 1626 142 46 6 18 18 18 18 18 18 18 18 18 18	Long 10 Lat Long 10 /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 DOMPTH: 353 351 Towing dir: 140° Wire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PBCIES Trichiurus lepturus Hematocarcinus afficanus Jiaphus sp. ACROURIDAE Symponticus ferox *arapaneus longirostris *arapaneus longirostris Samunida equamifere Solancora stricane Todaroppis eblanee	n min) Purpose GearCon Validit util050 m Sp. cch: 4.21 veight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.09	6 POSIT code: 3 is t 2 i.code: 1 y code: 1 heed: 33 k: CATCH HOUR & Numbers 6 892 1626 14 2 6 6 18 12	LON: Let Long *10 /HOUR: 0F TOT. C 26.60 23.99 21.05 12.11 7.60 3.56 1.43 0.95	S 1046 E 1316 8.42
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 DOMPTH: 353 351 Towing dir: 140° Wire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PBCIES Trichiurus lepturus Hematocarcinus afficanus Jiaphus sp. ACROURIDAE Symponticus ferox *arapaneus longirostris *arapaneus longirostris Samunida equamifere Solancora stricane Todaroppis eblanee	n min) Purpose GearCon Validit util050 m Sp. cch: 4.21 veight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.08 0.08	6 POSIT code: 3 is t 2 i.code: 1 y code: 1 heed: 33 k: CATCH HOUR & Numbers 6 892 1626 14 2 6 6 18 12	LON: Let Long /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 0.95 0.48	S 1046 E 1316 8.42
start stop duratio TIME :16:07100 16:37100 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 BDEPTH: 353 351 Towing dir: 140* Vire or Sorted: 4 Kg Total cat SPECIES Frichturus lepturus imantocarcionus africanus MacNouRIDAE Ynoponicus ferox *arapenaeus longirostris : A A B Summids equamifera Solanocera efricana Total DATE:16/ 9/94 GEAR start stop duratio	n min) Purpose GearCon Validit util050 m Spi 2.24 2.24 2.24 1.64 1.02 0.64 0.30 0.12 0.12 0.08 0.04 8.42	6 POSIT code: 3 is t 2 is code: 1 y code: 1 y code: 1 subers 6 892 1626 14 2 46 6 18 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	LON: Let Long *10 OF TOT. C 26,60 23,99 21,85 12,11 7,60 3,56 1,43 1,43 1,43 1,43 1,43 1,43 1,43 1,43	s 1046 E 1316 8.42 SAMP 0N: 2277 5 1043
start stop duratio TIME 1:6:07100 16:37100 30 (LOG 1:6:3710 33 30 (FOEFTH: 353 351 DDEFTH: 353 351 Towing dir: 140° Vire or Sorted: 4 Kg Total cat Sorted: 5 Sorted: 5	n min) Purpose Mreaco GearCon Validit util050 m Sp. cch: 4.21 CATCH// weight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.12 0.04 8.42 XTYPE: BT No: m min) Purpose GearCon GearCon Catcher State	6 POSIT code: 3 is t 2 is code: 1 y code: 1 y code: 1 subers 1626 14 2 46 6 18 12 2 2 4 6 6 18 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	LON: Let Long *10 /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	s 1046 E 1316 8.42 SAMP
start stop duratio TIME :16:07100 16:37100 30 (LOG :6638.20 6639.90 1.70 FORETH: 353 351 DDEFTH: 353 351 Towing dir: 140° Vire on Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat Sorted	n min) Purpose GearCon Validit: util050 m Spi cch: 4.21 2.24 2.02 1.84 1.04 0.64 0.30 0.12 0.12 0.12 0.12 0.12 0.24 8.42	6 POSIT code: 3 ie : 2 i.code: 1 y code: 1 wed: 33 km CATCH HOUR % HOUR % 1626 14 2 46 6 18 12 2 46 6 18 12 2 46 6 18 12 2 46 6 18 12 2 46 6 18 12 2 46 6 18 12 2 46 6 18 12 2 2 12 12 12 12 12 12 12	LON: Let Long *10 /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	s 1046 E 1316 8.42 SAMP ON: 2277 5 1043
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORETH: 353 351 Towing dir: 140' Wire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PECIES Trichiurus lepturus Hemetocarcinus africanus Jiaphus sp. ACROURIDAE Ympopnicus ferox *arapeneeus longirostris Tapa ne Start stop Colanocera efficane Total DATE:16/ 9/94 GEAR Start stop duratio TIME :18:07:00 18:37:00 30 (LOG :6646.30 6647.80 1.50 FDETH: 447 450 BDETH: 447 450 FDETH: 447 450 FORETH: 447 450 F	n min) Purpose GearCon Validit util050 m Spi cch: 4.21 CATCH// veight 2.24 0.64 0.64 0.64 0.64 0.02 0.09 0.09 0.09 0.00 8.42 ************************************	6 POSIT code: 3 ie : 2 d.code: 3 i.code: 3 i.code: 3 i.code: 3 i.code: 3 i.code: 4 6 8 14 2 2 1626 14 2 2 4 6 8 8 2 2 4 6 6 8 8 2 2 4 6 6 8 8 2 2 4 6 6 8 8 2 2 2 2 2 2 2 2 2 2 2 2 2	LON: Let Long *10 /HOUR: OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	s 1046 E 1316 B.42 SAMP S 1043 F 1312 335,88
start stop duratio TIME :16:07100 16:37100 30 (LOG :6638.20 6639.90 1.70 FORETHI: 353 351 DOEPTH: 353 351 Towing dir: 140' Wire or Sorted: 4 Kg Total cat PECIES Trichiurus lepturus Hematocarcinus afgicanus Jiaphus sp. ACROURIDAE Tapanesus longirostris Tapanesus longirostris Tapanesus longirostris Tapanesus longirostris Tapanesus fricane Total DATE:16/ 9/94 GEAR Start stop duratio TIME :18:07:00 18:37:00 30 (LOG :6646.30 6647.80 1.50 FORETH: 447 450 BDETH: 447 450 FORETH: 447 450 FORETH: 447 450 Sorted: 27 Kg Total cat SPECIES	n min) Purpose Min) Purpose GearCon Validit util050 m Sp. CATCH// weight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.12 0.08 0.04 8.42 8.42 1.7YPE: BT No: n min) Purpose Area Co GearCon Validit 1.02 0.64 0.30 0.04 0.12 0.02 0.64 0.30 0.04 0.12 0.02 0.64 0.30 0.04 0.12 0.02 0.04 0.12 0.02 0.04 0.12 0.02 0.04 0.12 0.02 0.04 0.12 0.02 0.04 0.02 0.04 0.02 0.04 0.05 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.05 0.04 0.02 0.04 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.02 0.04 0.02 0.05 0.04 0.02 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.02 0.04 0.04 0.04 0.05 0.04 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.0	6 POSIT code: 3 le t 2 l.code: 3 l.code: 3 rode: 1 humbers 8 1626 16 6 16 16 16 16 16 16 16 16 16 16 16	ION: Let Long *10 OF TOT. C 26.60 23.99 21.05 12.11 7.60 3.56 12.11 7.60 3.64 12.11 7.60 3.64 12.11 7.60 3.64 1.43 0.45 1.43 0.45 1.00 1.00 0.00 JECT STATI ION: Let Long b*10 /HOUR: OF TOT. C	s 1046 E 1316 B.42 SAMP S 1043 F 1312 335,88
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 Towing dir: 140' Wire or Sorted: 4 Kg Total cat Sorted: 4 Kg Total cat PBCIES Trichiurus lepturus Hematocarcinus africanus Jiaphus sp. ACROURIDAE Tapanesus longirostris Tapanesus longirostris Tapanesus longirostris Tapanesus longirostris Tapanesus longirostris Tapanesus longirostris Tapanesus ferox Tapanesus ferox Tapanesus ferox Tapanesus ferox Total DATE:16/ 9/94 GEAR Start stop duratio TIME :18:07:00 18:37:00 30 (LOG :6646.30 6647.80 1.50 FORFTH: 447 450 BDETH: 447 450 Sorted: 27 Kg Total cat SPECIES Hematocarcinus africanus Herluccius polli	n min) Purpose Mrasco GearCon Validit util050 m Sp cch: 4.21 CATCH// weight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.12 0.08 0.04 8.42 8.42 1.7YPE: BT No: min) Purpose Mrasco GearCon Validit 1.15, 80 0.7CH// veight 121,80	6 POSIT code: 3 is t 2 is code: 3 is code: 3 is code: 3 is code: 3 is code: 1 code: 3 is code: 3 is code: 3 is code: 1 code: 3 is code: 1 is code: 1 is code: 3 is code: 1 is code: 3 is code: 1 is code: 1 is code: 1 is code: 1 code: 2 code: 1 is code: 1 is code: 1 code: 2 code: 2 code: 1 code: 2 code: 2 code: 2 code: 1 code: 2 code:	LON: Let Long *10 OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 12.11 7.60 3.64 10.00 JECT STATI LON: Lat Long b*10 /HOUR: OF TOT. C 36.26 34.48	s 1046 B 1316 8.42 SAMP S 1043 S 1043 S 1043 S 1043 S 1045 S 1043 S 1045 S 1045 S 1045 S 1046 S 1046
start stop duratio TIME :16:07100 16:37100 30 (LOG :6638.20 6639.90 1.70 FORETHI: 353 351 DDEPTH: 353 351 Towing dir: 140' Wire on Sorted: 4 Kg Total cat PECIES Trichiurus lepturus Hemedocarcinus africanus laphus sp. ACROUNIDAE Numnida equamifere Solancera efficane Total DATE:16/ 9/94 GEAR Start stop duratio TIME :18:07:00 18:37:00 30 (LOG :6646.30 6647.80 1.50 FDETH: 447 450 Towing dir: 315' Wire of Sorted: 27 Kg Total cat SPECIES Hematocarcinus africanus Hematocarcinus africanus Hematocarcinus africanus Hematocarcinus africanus Hematocarcinus africanus Hematocarcinus africanus Hematocarcinus africanus Herluccius polli Jamenea Lauraysi MCCROURIDAE	n min) Purpose GearCon Validit util050 m Sp cch: 4.21 CATCH/ veight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.12 0.08 0.04 8.42 8.42 0.64 0.30 0.12 0.12 0.08 0.04 8.42 0.12 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.12 0.05 0.04 0.04 0.12 0.05 0.04 0.04 0.04 0.04 0.12 0.05 0.04 0.04 0.12 0.05 0.04 0.12 0.05 0.04 0.12 0.05 0.04 0.12 0.05 0.05 0.05 0.05 0.15 0.05 0.15 0.	6 POSIT code: 3 ie t 2 i.code: 3 i.code: 3 Numbers 16266 1626 1626 1626 1626 1626 1626 1626 1626 1626 16	LON: Let Long *10 OF TOT. C 26.60 23.99 21.211 7.60 3.56 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	s 1046 E 1316 B.42 SAMP S 1043 F 1312 335,88
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORETHI 353 351 DDEFTHI 353 351 Towing dir: 140° Vire or Sorted: 4 Kg Total cat PECIES Trichlurus lepturus imanua popurations afficanus inaphua sp. ACROWRING K Ynoponticus ferox 'srapenaeus longirostris :R A B S Numinda equanifera iolencoera efticane 'cdaropsis eblanae 'otal DATE: 16/ 9/94 GEAR start stop duratio TIME :18:07:100 18:37:00 30 (LOG :666:30 6647.80 1.50 FDEFTH: 447 450 DDEFTH: 447 450 DDEFTH: 447 450 FORING dir: 315' Vire o Sorted: 27 Kg Total cat 'FECIES Mematocarcinus africanus Herluccius polli asenomena laureysi ACROURIDAE	n min) Purpose Mrasco GearCon Validit util050 m Sp ich: 4.21 CATCH/ veight 2.24 1.84 1.62 0.64 0.65 0.55	6 POSIT code: 3 is t 2 is code: 3 is code: 3 is code: 3 is code: 3 is code: 4 is code: 4 is code: 4 is code: 4 is code: 5 v code: 1 is code: 3 is co	LON: Let Long +10 OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43 0.95 0.48 100.00 JECT STATI ION: Let Long -10 /HOUR: OF TOT. C 36.26 34.48 18.40 2.43 2.04	s 1046 B 1316 8.42 SAMP S 1043 S 1043 S 1043 S 1043 S 1045 S 1043 S 1045 S 1045 S 1045 S 1046 S 1046
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORETHI 353 351 DDETHI 353 351 Towing dir: 140° Vire or Sorted: 4 Kg Total cat PECIES Trichlurus lepturus imanua popurations afficanus inaphua sp. ACROWRIDAR Ynoponticus ferox 'srapenaeuu longirostris :R A B S mumida equanifera iolencoera efticane 'cdaropsis eblanae 'otal DATE: 16/ 9/94 GEAR start stop duratio TIME :18:07:00 18:37:00 30 (LOC :6645.30 6647.80 1.50 FDEFTH: 447 450 DDEFTH: 447 450 DDEFTH: 447 450 FORING dir: 315' Vire o Sorted: 27 Kg Total cat 'FECIES Mematocarcinus africanus Herluccius polli asenomena laureysi ACROURIDAE NESS	n min) Purpose Mrasco GearCon Validit util050 m Spi cch: 4.21 CATCH/ veight 2.24 1.84 1.62 0.64 0.65 0.64 0.81 0.81 0.65 0.84 4.32 4.08 0.65 0.84 4.32 4.08 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.85 0.65 0.85	6 POSIT code: 3 is t 2 is code: 3 is code: 3 is code: 3 is code: 3 is code: 3 is code: 4 code: 1 is code: 2 code: 1 is code: 2 code: 3 is code: 3 is code: 3 is code: 3 is code: 3 is code: 3 is code: 1 is code: 1 i	LON: Let Long *10 OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43 0.45 1.43 1.43 1.43 1.43 1.43 1.44 1.00 0.00 100.00 JECT STATI LON: Let Long 0.70 7.00 100.00 0 HOUR: COT TOT. C 36.26 34.48 18.40 2.43 2.43 2.43 2.43 2.43 2.43 2.43 2.43	s 1046 B 1316 B 42 SAMP S 1043 B 1312 S 1043 S 1043 S 1043 S 1043 S 1045 S 1043 S 1045 S 1045 S 1046 S 1046
start stop duratio TIME :16:07:00 16:37:00 30 (LOG :6638.20 6639.90 1.70 FORETHI 353 351 BDEPTHI 353 351 Towing dir: 140' Wire or Sorted: 4 Kg Total cat PECIES Trichiurus lepturus sematocarcinus africanus laphus sp. ACROURIDAE Tokaron a stricane Total de start stop duratio TIME :18:07:00 18:37:00 30 (LOC :6646.30 6647.80 1.50 FDEFTH: 447 450 BDEFTH: 447 450 BDEFTH: 447 450 Towing dir: 315' Wire or Sorted: 27 Kg Total cat SPECIES Hematocarcinus africanus ierluccius polii assonema lauraysi MCROURIDAE Visteus Varidena, female BortonaE	n min) Purpose GearCon Validit util050 m Sp cch: 4.21 CATCH// veight 2.24 2.02 1.84 1.02 0.64 0.30 0.12 0.12 0.08 0.04 8.42 8.42 8.42 0.64 0.30 0.12 0.12 0.08 0.04 8.42 8.42 8.42 8.42 0.58 0.64 0.30 0.12 0.12 0.12 0.08 0.04 0.20 0.12 0.08 0.04 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.12 0.05 0.12 0.05 0.12 0.05 0.12 0.05 0.12 0.05 0.12 0	6 POSIT code: 3 16 t 2 1.code: 3 1.code: 3 16 t 2 1.code: 3 16 t 2 16 t 2 17 t 2 17 t 2 18	LON: Let Long *10 /HOUR: OF TOT. C 26.60 23.99 23.99 5.12.85 12.85 12.85 12.85 12.85 12.95 12.95 12.95 12.95 12.95 12.95 12.11 7.60 3.56 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.43	s 1046 E 1316 B 42 SAMP S 1043 S 1043 S 1043 S 1043 S 1043 S 1043 S 1045 S 1045 S 1045 S 1045 S 1046 S 1047 S 1047
start stop duratio TIME :16:07100 16:37100 30 (LOG :6638.20 6639.90 1.70 FORFTH: 353 351 BDEFTH: 353 351 Towing dir: 140° Vire on Sorted: 4 Kg Total cat SPECIES Frichturus lepturus imantocarcionus africanus haphus sp. AcCOURI DAE Symoponicus ferox argenseus longirostris i A B S busunida quemifera bolanocera africana fodaropsis eblanae total DATE:16/ 9/94 GEAR start stop duratio TIME :18:07100 18:37:00 30 (LOG :6646.30 6647.80 1.50 FORFTH: 447 450 BDEFTH: 447 450	n min) Purpose Mrasco GearCon Validit util050 m Spi cch: 4.21 CATCH/ veight 2.24 1.84 1.02 0.64 0.65 0.64 0.81 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.65 0.84 0.85 0.65 0.84 0.85	6 POSIT code: 3 ie t 2 i.code: 3 i.code: 3 Numbers 1626 1566 1566 1566 1566 156 1526	LON: Let Long *10 OF TOT. C 26.60 23.99 21.85 12.11 7.60 3.56 1.43 1.43 0.45 1.43 1.43 1.43 1.43 1.43 1.44 1.00 0.00 100.00 JECT STATI LON: Let Long 0.70 7.00 100.00 0 HOUR: COT TOT. C 36.26 34.48 18.40 2.43 2.43 2.43 2.43 2.43 2.43 2.43 2.43	s 1046 B 1316 B 42 SAMP S 1043 B 1312 S 1043 S 1043 S 1043 S 1043 S 1045 S 1043 S 1045 S 1045 S 1046 S 1046

2.04	72	0.61
1.08	36	0.32
0.96	96	0.29
0.72	36	0.21
0.60	12	0.18
0.48	48	0.14
0.48	12	0.14
0.36	24	0.11
335.88		100.00
	1.08 0.96 0.72 0.60 0.48 0.48 0.36	1.08 36 0.96 96 0.72 36 0.60 12 0.48 48 0.48 12 0.36 24

		PI	OJECT STATI	081 228
DATE: 17/ 9/94 GEAR	TYPE: BT NOT		TIONILAL	5 1046
start stop duration				E 1313
		code:		
LOG :6664.10 6665.40 1.30	Area co			
FDEPTH: 567 530		d.code:	•	
BDEPTH: 567 530		V Codes	•	
Towing dir: 145° Vire ou				
towing diet 145 eine ou	cition m sh	9601 %4	EU. 10	
Sorted: 26 Kg Total cato	h: 132.20	CATO	H/HOUR:	264.40
SPECIES	CATCH	HOUR	1 OF TOT. C	: SAMP
	weight	numbers		
Nematocarcinus africanus	109.00	24830	41.23	
Merluccius polli	75.50	130	28.56	476
Aristeus varidens, female	29.20	1440	11.04	477
Aristeus varidens, male	10.20	1280	3.86	476
MACROURIDAE	9.70	290	3.67	
GONOSTONATIDAE	7.10	260	2.69	
Etmopterus spinaz	6.70	50	2.53	
Geryon maritae	4.50	10	1.70	
Todaropsis eblance	4.10	40	1.55	
Scyllarides herklotsii	3.80	330	1.44	
Hoplostethus cadenati	3.20	90	1.21	
LOPHIIDAE	1.40	70	0,53	
Total	264.40		100.01	

			PI	OJECT STA	TIO	1: 229
DATE: 17/ 9/94	GEAR TYPE	BT NO	6 POSI	TIONILat	S	1100
start stop d	uration			Long	E	1320
TIME :02:53:00 03:23:00		Purpose	t Coder			
	1.60	Area co		2		
FDEPTH: 470 480		GearCon	d. code :	-		
BDEPTH: 470 480		Validit	y code:	1		
Towing dir: 180" W	fire out:15					
Sorted: 25 Kg Tot.	al catch:	203.5	CATO	H/HOUR:	40	07.04
SPECIES		CATCH	HOUR	S OF TOT.	с	SAM
	۷	eight	numbers			
Roplostethus cadenati		318.40	11424	78.2		
Nematocarcinus africanus		57.12	17136	14.0	3	
Merluccius polli		9.92	16	2.4	4	
MACROURIDAE		8.48	192	2.0	8	
SONOSTOMATIDAE		5.12	352	1.2	6	
Stmopterus spinax		4.32	480	1.0	6	
Chlorophthalmus atlanticus		1.92	48	0.4	7	
Scyllarides herklotsii		1.12	80	0.2	8	
CRABS		0.32	16	0.0	8	
LOPHIIDAE		0.32	48	0.0	8	
Total		407.04		100.0	ō	

DATE: 17/ 9/94 GEAR TY	PE: BT No:		BCT STATIO ON:Lat S	1106
start stop duration			Long E	
TIME :04:48:00 05:18:00 30 (min) Purpose	code: 3	, -	
LOG :6697.50 6699.00 1.50	Area co			
FDEPTH: 353 341	GearCo	d.code:		
BDEPTH: 353 341	Validi	y code: 1		
Towing dir: 360° Wire out:	1050 m Sp	eed: 30 kn	•10	
Sorted: 23 Kg Total catch:	\$5.81	CATCH/	HOUR: 1	71.62
SPECIES	CATCH	HOUR 1	ог тот. с	SAME
	weight	numbers		
Merluccius polli	84.00	370	48.95	483
Hoplostethus cadenati	45.36	1484	26.43	
MACROURIDAE	8.18	244	4.77	
Trachipterus trachypterus	6.58	14	3.83	
Necharriotta pinnata	6.00	2	3.50	
Parapenaeus longirostris, fem.	5.18	644	3.02	480
CONGRIDAE	3.36	48	1.96	
Plesiopenaeus edwardsianus	2.52	980	1.47	
Chlorophthalmus atlanticus	2.16	\$6	1.26	
Todaropsis eblanae	1.88	34	1,10	
Epigonus telescopus	1.88	14	1.10	
Diaphus sp.	1.40		0.82	
Zenopsis conchifer	0.90	6	0.52	
Parapenaeus longirostris, male	0.84	112	0.49	479
Stmopterus spinax	0.56	42	0.33	
LOPHIIDAE	0.48	20	0.28	
Solenocera africana	0.28	14	0.16	
Total	171.56		99.99	

Chlorophthaimus atlanticus	2.10	20	1.20	
Todaropsis eblanae	1.88	34	1,10	
Epigonus telescopus	1.88	14	1.10	
Diaphus sp.	1.40		0.82	
Zenopsis conchifer	0.90	6	0.52	
Parapenaeus longirostris, male	0.84	112	0.49	479
Etmopterus spinax	0.56	42	0.33	
LOPHIIDAE	0.48	20	0.28	
Solenocera africana	0.28	14	0.16	
Total	171.56		99.99	

		PR	DJECT STATIC	≫ı 231
DATE: 17/ 9/94 GEAR	TYPE: BT No	:6 POSI	TION:Lat S	5 1106
start stop duration	`		Long I	z 1334
TIME :06:29:00 06:59:00 30 (:	ain) Purpos	e code:	3	
LOG :6703.70 6705.20 1.50	Area c		2	
FDEPTH: 203 200	GearCo	nd.code:		
BDEPTH: 203 200	Validi	ty code:	1	
Towing dir: 170° Wire ou	t: 600 m S	peed: 27	kn*10	
Sorted: 62 Kg Total cate	ch: 248.5	2 CATO	H/HOUR: 4	197.04
SPECIES	CATCH		t of tot. c	SAME
	weight	numbers		
Trachurus trecae	222.00	1880	44.66	483
Diaphus sp.	75.20	23632	15.13	
Synagrops microlepis	64.72	12944	13.02	
Merluccius polli	46.40	272	9.34	484
Denter macrophthalmus	42.88	168	8.63	482
Trichiurus lepturus	9.20	48	1.85	
Parapenaeus longirostris, fem.	8.24	1696	1.66	486
Chlorophthalmus atlanticus	8.16	152	1.64	
Brotula barbata	8.00	8	1.61	
Pterothrissus belloci	4.48	8	0.90	
Parapenaeus longirostris, male	3.92	880	0.79	485
Zenopsis conchifer	2.64	40	0.53	
Total	495.84		99.76	

	P	ROJECT STATION: 232
DATE: 17/ 9/94 GEAR T	YPE: BT No:6 POS	ITION:Lat S 1106
start stop duration		Long E 1339
TIME :08:01:00 08:12:00 11 (mi	n) Purpose code:	3
LOG :6710.60 6711.10 0.50	Area code :	2
FDEPTH: 105 100	GearCond.code:	9
BDEPTH: 105 100	Validity code:	1
Towing dir: \$0" Wire out:	: 350 m Speed: 30	kn*10
Sorted: 69 Kg Total catch	125.72 CAT	CH/HOUR: 685.75
SPECIES	CATCH/HOUR	OF TOT. C SAMP
	weight numbers	
Trachurus trecae	146.02 1156	
Synagrops microlepis	138.38 10107	
Denter macrophthalmus	118.80 518	
Branchiostegus semifasciatus	56.51 60	
Scorpaena angolensis	40.91 87	
Trichiurus lepturus	29.84 87	
Brotula barbata	27.49 65	
Atractoscion aequidens	24.05 11	
Pterothrissus belloci	18.87 125	
Uranoscopus polli	15.71 49	
LOPHIIDAE	12.38 27	
Epinephelus goreensis	9.55 22	
Dentex angolensis	8.78 22	
Umbrina canariensis	8.45 11	
Zeus faber	7.91 22	
Cynoglossus sp.	6.00 11	
Calappa sp.	5.89 27	
Scorpaena stephanica	5.29 11	
Citharus linguatula	3.11 27	
Sepia sp.	0.38 11	0.06
Total	684.32	99.78

		PRC	JECT STATIO	1: 233
DATE: 17/ 9/94 GEAR TY	PE: BT No:6	POSIT	ION:Lat S	1106
start stop duration			Long E	1344
TIME :08:12:00 08:42:00 30 (min	} Purpose	code: 3)	
LOG 16717.20 6719.00 1.80	Area cod	• : 2	2	
FDEPTH: 62 64	GearCond	code:		
BDEPTH: 62 64	Validity	code: 1	L	
Towing dir: 193° Wire out:	250 m Spe	nd: 27 k	n*10	
Sorted: 57 Kg Total catch:	130.47	CATC	I/HOUR: 2	50.94
SPECIES	CATCH/H	OUR 1	OF TOT. C	SAMP
	weight n	umbers		
Trachurus trecae	90.44	360	34.66	490
Dentex macrophthalmus	54.00	212	20.69	489
Pterothrissus belloci	22.68	194	8.69	
Dentex canariensis	15.96	166	6.12	491
Trachurus, Juveniles	12.36	1772	4.74	
Trichiurus lepturus	11.88	80	4.55	
Octopus sp.	7.56	18	2.90	
Zeus faber	7.46	19	2.86	
Parapenaeus longirostris, fem.	7.14	1908	2.74	493
Atractoscion acquidens	6.30	4	2.41	
Pagellus bellottii	5.40	18	2.07	
Brotula barbata	4.36	22	1.67	
Perulibatrachus elminensis	3.10	4	1.19	
Chaetodon hoefleri	2.92	30	1,12	
Citharus linguatula	2.70	26	1.03	
Scorpaena stephanica	2.34	10	0.90	
Parapenaeus longirostris, male	1.56	512	0.60	492
GOBIIDAE	1.34	98	0.51	
Cynoglossus sp.	0.58	4	0.22	
Grammoplites gruveli	0.22	4	0.08	
Umbrina canariensis	0.18	4	0.07	
Scorpaena angolensis	0.18	4	0.07	
Merluccius polli	0.18	14	0.07	
Total	260.84		99.96	

BT Noi6 Purpose co Area code GearCond.c Validity c 0 m Speed 61.28 CATCH/HOU bight num 91.70 4.04 3.52 3.52 3.44 3.18 2.98 2.46	POSITION: de: 3 : 2 :ode: : 28 kn*10 CATCH/HOU R & OF	Long E	1114
Area code GearCond.c Validity c 0 m Speed 61.20 CATCE/HOU ight num 91.70 4.04 3.02 3.52 3.44 3.10 2.90	: 2 :code: :code: 1 :: 28 kn*10 CATCH/HOL CATCH/HOL TR & OF :bers 330 198 34 98 8	JR: 12 TOT. C 74.82 3.30 3.12	2.56
Area code GearCond.c Validity c 0 m Speed 61.20 CATCE/HOU ight num 91.70 4.04 3.02 3.52 3.44 3.10 2.90	: 2 :code: :code: 1 :: 28 kn*10 CATCH/HOL CATCH/HOL TR & OF :bers 330 198 34 98 8	JR: 12 TOT.C 74.82 3.30 3.12	
Validity c 0 m Speed 61.28 CATCH/HOU bight num 91.70 4.04 3.852 3.44 3.18 2.98	ede: 1 : 28 kn*10 CATCH/HOL CATCH/HOL IR 1 OF 330 198 34 98 8	JR: 12 TOT.C 74.82 3.30 3.12	
61.28 CATCH/HOU bight num 91.70 4.04 3.52 3.52 3.44 3.18 2.98	CATCH/HOL TR & OF bers 330 198 34 98 8	JR: 12 TOT.C 74.82 3.30 3.12	
CATCH/FOU bight num 91.70 4.04 3.82 3.52 3.44 3.18 2.98	R 1 OF bers 330 198 34 98 8	TOT. C 74.82 3.30 3.12	
eight num 91.70 4.04 3.82 3.52 3.44 3.18 2.98	abers 330 198 34 98 8	74.82 3.30 3.12	Sam
eight num 91.70 4.04 3.82 3.52 3.44 3.18 2.98	abers 330 198 34 98 8	74.82 3.30 3.12	5.41
4.04 3.82 3.52 3.44 3.18 2.98	198 34 98 8	3.30 3.12	
3.82 3.52 3.44 3.18 2.98	98 8	3.12 2.87	
3.44 3.18 2.98	8		
2.98		2.81	
2.46	42	2.59 2.43	
1.78	8	2.01 1.45	
1.52	10	1.24	
1.24 1.18	2 2	1.01 0.96	
0.78	2	0.64	
21.60		99.27	
	PROJECT	STATION	. 21
BT Not6	POSITION	Lat S	112 133
Purpose co	de: 3	Long L	100
GearCond.c	odet		
Validity o	ode: 1	,	
			· · ·
1034.J5	CATCH/HOU	лкі 157	J.44
CATCH/HOU	R LOF	tot. c	SAM
174.80 1	1592	93.91	49
15.60	1200	0.99	
13.44	24	0.86	
	-		
BT Not6	PROJECT	STATION	1 23
		Long E	133
Area code	1 2		
5 m Speed	1 30 kn*10)	
227.08	CATCH/HOL	JR: 45	4.16
		тот. с	SAM
	abers 222	71.34	49
39.92	24	8.79	49
15.52	104	3.42	
12.80			49
7.60	8	1.67	
	40		
	8	0.72	
2.32		0.51	
	_		
51.20		55.57	
	PROJEC	T STATION	11 23
	POSITION	Lat S Long E	112 132
Purpose co	xde: 3 :2		
GearCond.c	code :		
varianty of	1: 32 kn*10)	
			\$.60
CATCH /HO	JR 1⊧∩‴	107. C	SAF
sight num	bers		45
108.74 23	9400	23.24	
			49
149.74	3874	\$.51	50
140.00 65.00	724 50	7.96	50
32.74	250 874	1.86 0.90	
15.74		0.70	50
15.74 12.24	150	0 41	- 51
15.74 12.24 7.24 7.00	150 1350 2	0.41 0.40	
15.74 12.24 7.24 7.00 5.74	150 1350 2 24	0.41 0.40 0.33	
15.74 12.24 7.24 7.00 5.74 3.74 3.74	150 1350 2 24 74 24	0.41 0.40 0.33 0.21 0.21	
15.74 12.24 7.24 7.00 5.74 3.74 3.74 3.24	150 1350 2 24 74	0.41 0.40 0.33 0.21 0.21 0.10 0.07	
15.74 12.24 7.24 7.00 5.74 3.74 3.74 3.24 1.24	150 1350 2 24 74 24 750 50 24	0.41 0.40 0.33 0.21 0.21 0.18 0.07 0.07	
15.74 12.24 7.24 7.00 5.74 3.74 3.74 3.24 1.24 1.24 1.24	150 1350 2 24 74 24 750 50 24 50 24	0.41 0.40 0.33 0.21 0.21 0.10 0.07 0.07 0.07 0.07	
15.74 12.26 7.24 7.00 5.74 3.74 3.74 3.74 1.24 1.24 1.24	150 1350 2 24 74 24 750 50 24 50	0.41 0.40 0.33 0.21 0.21 0.18 0.07 0.07 0.07	50
	0.78 0.70 0.02 21.66 BT Nor6 Purpose co Ares code 654.35 CATCH/HOU 13.44 4.20 570.44 BT Nor6 Purpose co Area code 227.08 CATCH/HOU 13.44 4.20 570.44 BT Nor6 Purpose co Area code GestCond.c Validity c 13.44 4.20 570.44 BT Nor6 Purpose co Area code GestCond.c Validity c 12.80 13.44 4.20 570.44 BT Nor6 Purpose co Area code GestCond.c Validity c 12.80 11.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.88 4.20 13.44 12.80 13.44 12.80 13.44 12.80 13.44 12.80 13.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.84 3.80 0.80 13.75 10.60 13.75 10.67 14.4 14.4 12.80 11.84 3.85 3.75	0.78 2 0.02 2 21.66 PROJECT BT No16 POSITION Purpose code: 3 Ares code : 2 GestCond.code: 1 Validity code: 1 0 a Speed: 29 kn*10 654.35 CATCH/HOU & 0 P 0 ight numbers 174.80 11592 654.35 CATCH/HOU & 0 P 15.60 1200 15.44 24 4.20 2 15.44 24 4.20 2 15.44 24 4.20 2 15.45 PROJECT BT No16 POSITION: Purpose code: 3 Area code : 2 GestCond.code: 1 227.08 CATCH/HOU & 0 P 15.85 Speed: 30 kn*10 227.08 CATCH/HOU & 0 P 15.85 Speed: 30 kn*10 227.08 CATCH/HOU & 0 P 15.85 104 15.82 104 15.82 104 15.82 104 15.83 Speed: 30 kn*10 227.08 CATCH/HOU & 0 P 15.82 104 15.23 0 11.84 8 3.28 8 2.32 8 3.35 0 2.35 0 2.50 0 3.50 0 3.	0.78 2 0.64 0.02 2 0.02 21.66 99.27 PROJECT STATION 18 TN016 POSITIONLALT S Purpose code: 3 Long E Ares code : 2 GesCond.code: Validity code: 1 0 m Speed: 29 kn*10 654.35 654.35 CATCH/HOUR: 157 CATCH/BOUR: 0 P TOT. C 0 ight numbers 174.40 11592 13.64 24 0.86 4.20 2 0.27 570.44 100.00 100.00 PROJECT STATION 13.44 24 0.86 4.20 2 0.27 570.44 100.00 227.08 CATCH/HOUR: PROJECT STATION 227.08 CATCH/HOUR: 4.72 20.00 96 4.42 12.40 88 71.34 39.92 24 8.79 20.00 96 4.20 21.20 12 13.42 <t< td=""></t<>

		PRO	JECT STATI	ON: 238
DATE:17/ 9/94 GEAR TY start stop duration	PE: BT No:	6 POSIT	ION:Lat Long	5 1127 E 1324
TIME 118:35:00 19:05:00 30 (min LOG :6769.20 6770.80 1.60) Purpose Area co	code: 3		
FDEPTH: 371 382 BDEPTH: 371 382	GearCon	d.code: y code: 1		
	1050 m Sp	aed: 31 k	n*10	
Sorted: 26 Kg Total catch:	105.00	CATCH	/HOUR:	210.00
SPECIES	CATCH/	HOUR	OF TOT. C	SAMP
Laemonena laureysi		numbers 8392	24.38	
Nematocarcinus africanus	46.40 41.92	19720 1552	22.10 19.96	
Hoplostethus cadenati Merluccius polli	34.80	72	16.57	503
SHARKS HACROURIDAE	11.44 6.72	360	5.45 3.20	
OFHIDIIDAE Schedophilus huttoni	5.04	24	2.40	
Chlorophthalmus atlanticus Aristeus varidens, male Aristeus varidens, female	1.76	48 280	0.84	504
Epigonus telescopus	1.52	320 8	0.72	505
Halosaurus sp. Illex coindetii	0.72	56 8	0.34	
Geryon maritze	0.32	8	0.15	
Total	210.00		100.00	
		PRO	JECT STATI	ON: 239
start stop duration	PE: BT No:		Long	S 1127 E 1322
LOG 17780.60 7782.20 1.60	Area co	xde : 2		
FDEPTH: 472 494 BDEPTH: 472 494	Validit	d.code:		
-	1350 m Sp			
Sorted: 27 Kg Total catch:	189.50	5 CATCI	1/ ROUKI	366.89
SPECIES	CATCH, weight	HOUR I	or tot. c	SAMP
Hoplostethus Cadenati Nematocarcinus africanus	226.26 \$6.03	1397 4674	61.67 23.45	
GONOSTONATIDAE	15.72 12.06	366 27	4.28 3.29	
Geryon maritae S H A R K S Chlorophthalmus atlanticus	11.38 6.10	14 27	3.10	
Halosaurus sp.	5.83	68	1.59	r 0.7
Aristeus varidens, female Glyphus marsupialis	1.63	163 14	0.44	507
Aristeus varidens, male Trichiurus lepturus	1.22	230 14	0.33 0.15	506
Total -	368.12		100.33	
		pp	DJECT STATI	08. 240
	PE: BT No		TIONILat	
start stop duration TIME :01:06:00 01:36:00 30 (mis	a) Purpos	e code:	TION:Lat Long 3	S 1141
start stop duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FDEPTH: 604 598	 Area construction GearConstruction 	:6 POSI e code: ode : nd.code:	FION:Lat Long 3 2	S 1141
start stop duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40	A) Purpos Area co GearCo Validi	:6 POSI a code: ode : nd.code: ty code:	TION:Lat Long 3 2	S 1141
start stop duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FDEFTH: 604 598 BDEFTH: 604 598	a) Purpos Area c GearCo Validi 1820 m Sp	a code: ode : nd.code: ty code: peed: 28	TION:Lat Long 3 2	S 1141
BLART Stop duration TIME :01106100 00136100 30 (min LOG :6802.80 6804.20 1.40 FDEFTH: 604 598 BDEFTH: 604 598 Towing dir: 360° Wire out:	a) Purpos Area c GearCo Validi 1820 m Sp	26 POSI e code: : ode : : nd.code: ty code: ty code: 28 1 6 CATCI /HOUR	TION:Lat Long 3 2 1 kn*10	S 1141 E 1318 226.48
BLART STOP dureation TIME :011:06:00 001:36:00 30 (min LOG :6802.80 6804.20 1.40 FURFTRI: 604 598 DEFTRI: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch:	a) Purpos Area c GearCo Validi 1820 m Sp 113.2 CATCH weight	a code: ode : nd.code: ty code: beed: 28 carc	TION: Lat Long 2 1 kn*10 H/HOUR: A OF TOT. C	S 1141 E 1318 226.48
start stop duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FVDETH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoploststhus cadenati MACROURIDAE Hematocarcinus africanus	 h) Purposi Area c. GearCo. Validi 1820 m Si : 113.2: CATCH. Weight 100.80 77.20 17.52 	s code: : ode : : nd.code: : ty code: ty code: catci catci catci catci catci catci catci	FION: Lat Long 2 1 kn*10 H/HOUR: & OF TOT. C 44.51 34.09	S 1141 E 1318 226.48
start stop duration THME :01106100 001:36100 30 (min LOG :6802.80 6804.20 1.40 FDEFTH: 604 598 DDEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES HOPLORITALS HORCHOURIDALS Hematocarcinus africanus GONOSTOMATIDAL	 h) Purpositive (Constraint) Area c. GearCo. Validi Validi 11820 m Signation (Constraint) CATCH. Veight 100.80 77.20 17.52 10.00 	té POSI e code: : ode : : nd.code: : ty code: ty code: 28 4 CATCI /HOUR / numbers 3024 2608 6032 392	FION:Lat Long 2 1 kn*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42	S 1141 E 1318 226.48
start stop duration THME :01106:00 001:36:00 30 (min LOG :6802.80 6804.20 1.40 FDEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURIDAE Nematocarcinus africanus GowOSTGMATIDAE Genyon maritae Scyllaridas herklotsii	 Area c: GearCo. Validi 113.2 CATCH. weight 10.80 77.20 17.52 10.00 5.36 4.24 80 	té POSI e code: : ode : : nd.code: : ty code: beed: 28 4 CATCI /HOUR : numbers 3024 2608 6032	FION: Lat Long 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S 1141 E 1318 226.48
start stop duration THME :01106:00 001:36:00 30 (min LOG :6802.80 6804.20 1.40 FDEFTH: 604 598 DEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Boplostathus cadenati MACROURIDAE Nematocarcinus africanus GowOSTOMATIDAE Geryon maritae Scyllarides herklotui COWORIDAE Aristeus varidens, male	 h) Purpos, Area c. GearCo. Validi 1820 m S; 113.2: CATCH. Weight 100.80 77.20 17.52 10.00 5.36 4.24 2.80 	16 POSI 1 code: 1 c	TION:Lat 3 2 1 km*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.24 0.98	S 1141 E 1318 226.48 : SAMP 508
start stop duration THE :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 TOETH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostethus cademati MACAOURIDAS Geryon maritas Scyllaridas herklotsii COWARIDAS Aristeus varidens, female Aristeus varidens, female Chlorophtalmas tathicus	Purpos, Area c, GearCo, Validi 1820 m Sj : 113.2: CATCH, Veight 100.80 77.20 17.52 10.00 5.36 4.24 2.80 2.00 1.76 1.44	16 POSI' 1 code: 1	TION:Lat 3 2 1 1 4/HOUR: 4 4 4 4 4 4 4 4 4 4 4 4 4	S 1141 E 1318 226.48 : SAMP
start stop duration THE :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FVDETH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadanati MACROURIDAS Hematocarcinus africanus GOMOSTOMATIDAS Scyllarides herklotsii COMORIDAS Aristeus varidans, male Aristeus varidans, male Aristeus varidans, female Chlorophtalmus atlanticus Etmopterus spinas	n) Purpos. Area c GearCo. Validi :1820 m Sp : 113.2 CATCH. Veight 100.80 77.20 17.52 10.00 536 4.24 2.80 2.00 1.76 1.44 1.20 0.76	16 POSI 1 Code: 1 C	TIONHIAT Long 2 1 1 Kn*10 K/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 1.24 0.88 0.64 0.53 0.53	S 1141 E 1318 226.48 : SAMP 508
start stop duration TIME :01106100 01:36100 30 (min LOG :6802.80 6804.20 1.40 FVDETH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadanati MACROURIDAE Hematocarcinus africanus GGMOSTOMATIDAE Hematocarcinus africanus GGMOSTOMATIDAE Sylarides herklotsii COMGRIDAE Aristeus varidans, sale Aristeus varidans, female Chlorophtalmus atlanticus Etmopterus spinar Ebinenia costaecanarie Plesiopenseus edvardsianus	n) Purpos. Area c GearCo. Validi :11220 m Sj : 113.2: CATCH. Veight 100.80 77.20 17.52 10.00 77.20 17.52 10.00 5.36 4.24 2.80 1.76 1.44 1.20 0.76 0.40	16 POSI 1 code: 1 c	TIONHIAL Long 2 1 kn*10 K/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 1.24 0.88 0.64 0.53 0.54	S 1141 E 1318 226.48 : SAMP 508
start stop duration THE :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FVDETH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadanati MACROURIDAS Hematocarcinus africanus GOMOSTOMATIDAS Scyllarides herklotsii COMORIDAS Aristeus varidans, male Aristeus varidans, male Aristeus varidans, female Chlorophtalmus atlanticus Etmopterus spinas	n) Purpos. Area c GearCo. Validi :1820 m Sp : 113.2 CATCH. Veight 100.80 77.20 17.52 10.00 536 4.24 2.80 2.00 1.76 1.44 1.20 0.76	16 POSI 1 Code: 1 C	TIONHIAE Long 2 1 1 Kn*10 K/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 1.24 0.88 0.64 0.53 0.53	S 1141 E 1318 226.48 : SAMP 508
start stop duration TIME :01106:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FVDETH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadanati MACROURIDAE Hematocarcinus africanus GGMOSTOMATIDAE Hematocarcinus africanus GGMOSTOMATIDAE Sylarides herklotsii COMGRIDAE Aristeus varidans, sale Aristeus varidans, female Chlorophtalmus atlanticus Etmopterus spinar Ebinenia costaecanarie Plesiopenseus edvardsianus	n) Purpos. Area c GearCo. Validi :11220 m Sj : 113.2: CATCH. Veight 100.80 77.20 17.52 10.00 77.20 17.52 10.00 5.36 4.24 2.80 1.76 1.44 1.20 0.76 0.40	16 POST a code: 104.code: ty code: ty code: ty code: 4 CATCI HOUR 10100 102 102 102 102 102 102 1	TIONILAL Long 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	s 1141 E 1318 226.48 : SAMP 508 509
BLART STOP duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FVEFTH: 604 598 DEPTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACKOURIDAE Hematocarcinus africanus GONGSTONATIDAE Geryon maritae Scyllarides hetlottii CONGRIDAE Aristeus varidens, feale Chiorophthalmus atlanticus Etmopterus spinax Ebinenia costaecanarie Plesiopenaeus edwardsianus Total	n) Purpos. Area c GearCo. Validi 11220 m Sy 113.22 113.22 100.80 77.20 17.52 10.00 77.20 17.52 10.00 77.20 17.52 10.00 5.36 4.24 2.00 1.44 1.20 0.76 0.40 2.25.48	16 POST 16 code: 101.code: 191	TIONILAT Long 2 1 tn*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 1.87 0.68 0.66 0.55 0.34 0.18 99.59 00JECT STAT1 TION:LAT	s 1141 E 1318 226.48 : SAMP 508 509
DATE:18/ 9/94 - GEAR T Total DATE:18/ 9/94 - GEAR T DATE:18/ 9/94 - GEAR T	Purpos Area c. GearCo. Validi 11820 m Sy 11820 m Sy 113.2 CATCH Veight 100.80 77.20 17.52 10.000 5.366 4.24 2.800 2.000 1.765 1.44 1.20 0.76 0.40 225.48	16 POST a code: 104.	TIONILAT Long 2 1 tn*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 1.87 0.68 0.64 0.53 0.34 0.18 99.59 OJECT STAT1 TIONILAT Long 3 0 0 0 0 0 0 0 0 0 0 0 0 0	s 1141 E 1318 226.48 : SAMP 509 509
DATE:18/ 9/94 - GEAR T Total DATE:18/ 9/94 - GEAR T Total DATE:18/ 9/94 - GEAR T Total DATE:18/ 9/94 - GEAR T Total DATE:18/ 9/94 - GEAR T Total	 Purpos. Area c. GearCo. Validi 11820 m Sp : 113.2 CATCH Veight 100.80 77.20 100.80 77.52 100.80 77.52 100.80 77.52 100.80 77.52 100.80 77.52 100.80 77.52 100.80 77.52 100.80 77.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 100.80 7.52 1.44 1.20 0.40 225.48 YPE: BT No n) Purpos Area c GearCo 	16 POST 1 code: 10d.	TIONILAT Long 2 1 1 4 N° 10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 1.24 0.68 0.64 0.53 0.34 0.18 99.59 00JECT STAT1 TIONILAT Long 2	s 1141 E 1318 226.48 : SAMP 508 509
DATE:18/ 9/94 GEAR T TOTAL JOING SUB Call.40 FORTHI 604 598 DOBPTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURIDAE Hematocarcinus africanus GONOSTONATIDAE Geryon maritae Scyllarides hetlottii COMORINAE Aristeus varidens, feale Chiorophthalmus atlenticus Emopierus spina: Ebinenia costaecanarie Plesiopenaeus edwardsianus Total	Purpos. Area c: GearCo. Validi :1820 m S; : 113.2: CATCH. Veight 100.80 77.20 17.52 10.00 77.20 17.52 10.00 5.36 4.24 2.80 2.00 17.62 2.00 2.00 2.00 0.76 0.40 225.48	16 POST 1 code: : 10 code: :	TIONILAT Long 2 1 thr*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.45 34.09 7.74 4.42 2.37 1.24 0.53 0.34 0.53 0.34 0.18 99.59 DJECT STATJ TIONILAT Long 2 1	s 1141 E 1318 226.48 : SAMP 508 509
DATE:18/ 9/94 GEAR T Source and a source an	Purpos. Area c. GearCo. Validi (1820 m S) (1820 m S)	16 POSI 1 code: 1 c	TIONILAT Long 2 1 thr*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.45 34.09 7.74 4.42 2.37 1.24 0.53 0.34 0.53 0.34 0.18 99.59 DJECT STATJ TIONILAT Long 2 1	s 1141 E 1318 226.48 : SAMP 508 509
DATE:18/ 9/94 GEAR T Start stop duration TIME Solication directions DEPTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURTNAS Hematocarcinus africanus GenosTownTIDAE Aristeus varidans, male Aristeus varidans, female Aristeus varidans, female Aristeus apinas Ebinania costaecanarie Plesiopenseus edvardeianus Total DATE:18/ 9/94 GEAR T start stop duration TME 10312100 03:42100 30 (mi LOG :6810.20 6811.60 1.40 PDETH: 394 391 DETTH: 394 391 Towing dir: 170° Wire out: Sorted: 21 Kg Total catch	Purpos. Area c. GearCo. Validi 11820 m Sy : 113.2 CATCH 100.80 77.20 10.00 5.36 4.24 2.80 2.00 1.76 2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80	16 POST 16 CODE: 10 CODE	TION:Lat Long 2 1 kn+10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 0.64 0.63 0.53 0.53 0.54 0.64 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.5	S 1141 E 1318 226.48 : SAMP 509 509 ton: 241 S 1142 E 1321 246.70
DATE:18/ 9/94 GEAR T Start stop duration TIME SOLOGION STATUS DEPTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURTNAE Hematocarcinus africanus GonoSTOWNIDAE Aristeus varidens, male Aristeus varidens, male Aristeus varidens, female Chiorophthalmus atlanticus Etmopterus spina: Ebinania costaecanarie Plesiopenaeus edvardeianus Total DATE:18/ 9/94 GEAR T start stop duration TME 10312100 0342100 30 (mai LOG :6810.20 6811.60 1.40 PDETH: 394 391 DETTH: 394 391 Toving dir: 170° Wire out: Sorted: 21 Kg Total catch SPECIES	Purpos. Area c. GearCo. Validi 11820 m Sy 11820 m Sy 113.2: CATCH Veight 100.80 77.20 10.00 5.36 4.2.80 2.00 1.76 2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80	16 POST 1 code: 1 c	TIONILAT Long 2 1 kn+10 K/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.8 0.64 0.53 0.34 0.53 0.53 0.54 0.53 0.54 0.53 0.54 0.53 0.54 0.53 0.54 0.54 0.53 0.54 0.53 0.54 0.54 0.54 0.54 0.55 0.55 0.55 0.55	S 1141 E 1318 226.48 : SAMP 509 509 ton: 241 S 1142 E 1321 246.70
Bistart stop duration TIME 10106100 00136100 30 (min LOG :6802.80 6804.20 1.40 FVEFTH: 604 598 DEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURTNAE Hematocarcinus africanus GonoSTOWATIDAE Chiorophthalmus atlanticus Etacopterus apinas Ebinanis costaccanarie Flesiopenaeus edwardsianus Total DATE:18/ 9/94 GEAR T Start stop duration TME 10312100 03142100 30 (min LOG :6810.20 6811.60 1.40 FVEFH: 394 391 DEFTH: 394 391 DEFTH: 394 391 Towing dir: 170° Wire out: Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Horizotus polini	Purpos. Area c. GearCo. Validi 11820 m Sy 11820 m Sy 113.2: CATCH Veight 100.80 77.20 10.00 5.36 4.2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80	16 POST 1 code: 1 c	TIONILAT Long 2 1 kn+10 K/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.8 0.64 0.53 0.53 0.53 0.54 0.64 0.53 0.54 0.53 0.54 0.65 1.24 0.8 0.54 0.54 0.54 0.53 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54	S 1141 E 1318 226.48 : SAMP 509 509 ton: 241 S 1142 E 1321 246.70
DATE:18/ 9/94 GEAR T SPECIES DATE:18/ 9/94 GEAR T DATE:18/ 9/94 GEAR T DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Sorted: 21 Kg Total catch: DATE:18/ 9/94 GEAR T Solution paritae Solution paritae DATE:18/ 9/94 GEAR T Start stop curations Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Start stop curations Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Solution paritae Solution paritae Species Solution paritae Solution paritae Solution paritae Solution paritae Solution paritae Solution paritae Species Solution paritae Sumpteres spinax	Purpos. Area c. GearCo. Validi 11820 m Sj : 113.2 CATCH Veight 100.80 77.20 10.00 5.36 4.24 2.80 2.00 1.76 1.44 1.20 0.46 2.25.48 YPE: BT No n) Purpos Area c GearCo GearCo S. Validi 1.20 m Sj : 123.3 CATCH Veight 1.49.50 26.50 7.70	16 POST 1 code: 1 code: 1 d.code: 1 d.code: 1 v code: 1 a code: 1 d.code: 1 d.code: 1 d.code: 1 a code: 1 a co	TIONILAT Long 2 1 kn+10 K/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 7.74 4.42 2.37 1.24 0.88 0.64 0.53 0.34 0.53 0.34 0.18 99.59 00JECT STATI TIONILAT Long 3 2 1 kn+10 H/HOUR: 4 OF TOT. C 60.60 10.74 .312	S 1141 E 1318 226.40 : SAMP 508 509 10N: 241 S 1142 E 1321 246.70 C SAMP
DATE:18/ 9/94 GEAR T TIME Total:00 1:400 J. PRETH: 604 598 DEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cademati HHCROWINDAS Hematocarcinus africanus GOMOSTOWNIDAE Chiorophthalmus atlanticus Etacpterus apinax Eblania costaecanarie Plasiopenaeus edwardsianus Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 J Second Company Total DATE:18/ 9/94 J Total DATE:18/ 9/94 J Second Company Total DATE:18/ 9/94 J Second Company Total DATE:18/ 9/94 J Second Company Total DATE:18/ 9/94 J Second Company Second Co	<pre>>) Purpos. Area c. GearCo. Validi 11820 m Sj : 113.2: CATCH veight 100.80 77.20 10.00 5.36 4.2.80 0.200 1.76 2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80</pre>	16 POST 1 code: 1 c	TION HAT Long 2 1 kn + 10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 9.59 0.64 0.53 0.34 0.18 99.59 00JECT STATI TION:Lat Long 3 2 1 kn + 10 H/HOUR: 4 OF TOT. C 60.60 10.74 3.20 3.20 4.31 2.21	S 1141 E 1318 226.40 : SAMP 508 509 10N: 241 S 1142 E 1321 246.70 C SAMP
DATE:18/ 9/94 GEAR T Total Colos Dirácio 30 (mini LOG :6802.80 6804.20 1.40 FVEFTH: 604 598 DEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplontathus cadenati HHCROWINDAS Hematocarcinus africanus GOMOSTOWINDA Aristeus varidans, feasle Chiorophtalmus atlanticus Etacpterus spinas Eblania costaecanarie Flasiopenaeus edwardsianus Total DATE:18/ 9/94 GEAR T STatt Stöp duration TIME :03:12:100 03:42:100 30 (mini LOG :6810.20 6811.60 1.40 FVEFTH: 334 331 DEFTH: 334 331 DEFTH: 334 331 DEFTH: 334 331 SPECIES Hoplostethus cadenati Herluccius polini KENDOURIDAE Etacpteres spinar Neastocarcinus africanus SPECIES	Purpos. Area c. GearCo. Validi 11820 m Sj : 113.2: CATCH 100.80 77.20 10.00 17.52 10.00 17.52 10.00 17.52 10.00 17.52 10.00 1.76 2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80	16 POST 16 CODE: 16 CODE: 16 CODE: 16 CODE: 16 CODE: 17 CODE: 18 CODE	TION HAT Long 2 1 kn + 10 4 / HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.87 9.59 0.64 0.53 0.34 0.18 99.59 0.02CT STATI TION:Lat Long 3 2 1 kn + 10 H/HOUR: 4 OF TOT. C 60.60 10.74 3.20 3.21 1.82 1.82 1.82 1.82 1.82 1.82 1.82 1	S 1141 E 1318 226.40 : SAMP 508 509 10N: 241 S 1142 E 1321 246.70 C SAMP
<pre>start stop duration TIME :01:06:00 01:36:00 30 (min LOG ::6802.80 6804.20 1.40 FVEFTH: 604 598 DEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati HNCROWINDAS Aristeus varidans, female Chlorophthalmus atlanticus Etacopterus apinax Ebinania Costaecanarie Flasiopenaeus edwardsianus Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Total DATE:18/ 9/94 GEAR T Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Machouring plinax Heatocarinus afficanus Geryon maritae Plasiopenaeus edwardsianus Total Costaecanarie Flasiopenaeus edwardsianus Total Costaecanarie Flasiopenaeus edwardsianus Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Machouring plinax Heatocarinus afficanus Geryon maritae Flasiopenaeus edwardsianus ConvostANIDAR Stampterus ppinax Heatocarinus afficanus Geryon maritae Flasiopenaeus edwardsianus ConvostANIDAR Stampterus ppinax Heatocarinus afficanus Geryon maritae Flasiopenaeus edwardsianus ConvostANIDAR Diaphus sp. CONONTIDAR</pre>	<pre>>) Purpos. Area c. GearCo. Validi :1820 m S; : 113.2 CATCH veight 100,80 77,20 17,52 10,080 77,20 17,52 10,080 77,20 17,52 10,080 4.24 2.80 2.00 1.44 1.20 0.76 0.40 225.48 YPE: BT No n) Purpos Area c GearCo Validi :1200 m S; : 123.3 CATCH veight 149,50 26,90 26,90 26,50 5,50 4.50 5,50 4.50 5,50 5,50 5,50 5,50 5,50 5,50 5,50 5</pre>	16 POST 16 COLE: 16 COLE: 16 COLE: 16 COLE: 16 COLE: 17 COLE: 18 COLE	TIONILAT Long 2 1 km*10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.12 4.42 2.37 1.24 0.88 0.78 0.78 0.78 0.78 0.78 0.78 0.75 0.59 0.34 0.34 0.34 0.34 0.34 0.34 0.34 0.34 0.34 0.51 10 10 0.64 0.53 0.34 0.51 0.59 0.75 0.64 0.51 0.64 0.51 0.65 0.55	s 1141 E 1318 226.40 : SAMP 508 509 (ON: 241 S 1142 E 1321 246.70 : SAMP
DATE:18/ 9/94 - GEAR T Start stop duration TIME Solication Solication PRETH: 604 598 DEPTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURIDAS Geryon maritae Scyllarides hetlostii COMORINAS Chiorophthalmus atlanticus Etaopterus spinar Rotal costaecanarie Plesiopensus devardsianus Total DATE:18/ 9/94 - GEAR T start stop duration TIME 103:12:10 03:42:00 30 (mi: LOG :6810.20 6811.60 1.40 PRETH: 394 391 Towing dir: 170° Wire out: Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Methodas Etaopterus spinar Neastorcinus africanus Geryon maritae Plesiopensus devardsianus Total	<pre>>) Purpos. Area c. GearCo. Validi 11820 m Sy : 113.2 CATCH Veight 100.80 77.20 11.60 5.36 4.24 2.80 2.00 1.7.62 10.00 5.36 4.24 2.80 2.00 1.44 1.20 0.76 0.40 225.48 YPE: BT No 0.76 0.40 225.48 YPE: D No Purpos Xrea c. GearCo. Validi 149.50 26.90 26.50 7.70 6.50 5.00 4.10 3.60 3.10 2.60 3.10 2.60 3.10 2.60 3.10 3.10 3.10 3.10 3.10 3.10 3.10 3.1</pre>	16 POST 16 COL 16 CO	TIONILAT Long 2 1 kn*10 4/HOUR: 4 OF TOT. C 44.51 34.09 7.124 4.42 2.37 1.24 0.88 0.78 0.78 0.78 0.78 0.78 0.78 0.75 1.04 0.59 0.75	S 1141 E 1318 226.40 : SAMP 508 509 10N: 241 S 1142 E 1321 246.70 C SAMP
DATE:18/ 9/94 . GEAR T SPECIES DATE:18/ 9/94 . GEAR T Sorted: 28 Kg Total catch: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURIDAS Geryon maritae Scyllarides hetlostil COMORIDAS Etaopterus spina: Etaopterus spina: Etaopterus spina: DATE:18/ 9/94 . GEAR T start stop duration THE 103:12:10 03:42:00 30 (mi: LOG :6810.20 6811.60 1.40 PDEFH: 394 391 Towing dir: 170* Wire out: Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Mercourt spina: Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Mercourt spina: Neartoccinus africanus Geryon maritae Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Mercourt spina: Neartoccinus africanus Geryon maritae Chiorophtmisus stlanticus Disphus sp. COMORIDAS	<pre>>) Purpos. Area c. GearCo. Validi 11820 m Sy : 113.2 CATCH 100.80 77.20 11.00 77.20 10.00 77.20 11.00 77.20 11.00 77.20 11.00 77.20 11.20 11.52 10.00 5.36 4.24 2.80 2.00 1.75 2.80 2.00 2.00 1.44 1.20 0.76 0.40 225.48 YPE: BT No Area c. GearCo. Validi 149.50 26.90 7.70 6.50 5.00 4.10 3.60 3.10 2.60 3.10 2.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1</pre>	16 POST 16 COL 16 CO	TIONILAT Long 2 1 1 Kn*10 4/HOUR: 4 OF TOT. C 44.51 34.09 7.7 4.42 2.37 1.24 0.88 0.78 0.78 0.78 0.78 0.78 0.75 0.75 0.75 1.24 0.55 0.55 0.55 1.05 1.05 1.05 1.05 1.05	S 1141 E 1318 226.40 : SAMP 508 509 10N: 241 S 1142 E 1321 246.70 C SAMP
BLATE stop duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FREFTH: 604 598 DDEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURIDAS Hematocarcinus africanus GCMOSTONATIDAE Geryon maritae Scyllarides hetlottil COMORIDAE Etaopterus spinax Etaoterus spinax Etaoterus spinax Etaoterus spinax DATE:18/ 9/94 . GEAR T start stop duration TIME :03:12:00 03:42:00 30 (min LOG :6810.20 6811.60 1.40 FREFTH: 394 391 DDEFTH: 394 391 DDEFTH: 394 391 DDEFTH: 394 391 Towing dir: 170° Wire out: Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati Merluccius polnax Nematocarcinus africanus Geryon maritae Tiesiopeneus devardsianus Total Street: Spinax Hendostathus cadenati Merluccius polnax Hendostathus cadenati Merluccius polnax Hendostathus cadenati Merluccius spinax Disphus sp. COMORIDAE Stapterus spinax Disphus sp. COMORIDAE Plesiopeneus devardsianus GONOSTONATIDAE Disphus sp. COMORIDAE Petheroscion mbiri Scyllaridee herklotrii	<pre>>) Purpos. Area c. GearCo. Validi 11820 m Sy : 113.2 CATCM 100.80 77.20 11.000 5.36 4.24 2.80 2.00 1.7.52 10.000 5.36 4.24 2.80 2.00 1.7.52 10.00 2.5.00 4.24 2.25.48 YPE: BT No 0.76 0.40 225.48 YPE: 123.3 CATCM Validi 149.50 26.50 7.70 6.5.00 4.10 3.60 3.10 2.6.50 7.70 6.5.00 4.10 3.60 5.5.00 4.10 3.60 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 5.5.00 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 6.5.00 7.70 7.70 7.70 7.70 7.70 7.70 7.70</pre>	16 POST 1 code: 1 c	TIONILAT Long 2 1 1 Kn*10 4/HOUR: 4 OF TOT. C 44.51 34.09 7.7 4.42 2.37 1.24 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.75 0.75 1.24 0.55 0.55 0.55 1.66 1.26 1.26 1.26 1.26 1.26 1.26 1.26	S 1141 E 1318 226.40 : SAMP 508 509 10N: 241 S 1142 E 1321 246.70 C SAMP
BLATE stop duration TIME :01:06:00 01:36:00 30 (min LOG :6802.80 6804.20 1.40 FREFTH: 604 598 DDEFTH: 604 598 Towing dir: 360° Wire out: Sorted: 28 Kg Total catch: SPECIES Hoplostathus cadenati MACROURIDAS Hematocarcinus africanus GCMORIDAS Garyon maritae Scyllarides hetlottil COMORIDAS Etaopterus ppinax Etaopterus ppinax Etaopterus ppinax Etaopterus ppinax DATE:18/ 9/94 . GEAR T start stop duration TIME :03:12:00 03:42:00 30 (min LOG :6810.20 6811.60 1.40 FREFH: 394 391 DEFTH: 394 391 DEFTH: 394 391 DEFTH: 394 391 DEFTH: 394 391 Towing dir: 170° Wire out: Sorted: 21 Kg Total catch SPECIES Hoplostathus cadenati MacRoURIDAS Etaopterus ppinax Nematocarcinus africanus Geryon maritae Thesiopenaeus devardsianus ComoRIDAS Etaopterus ppinax Mentocarinus africanus Geryon maritae Plesiopenaeus devardsianus ComoRIDAS Etaopterus ppinax Mentocarinus africanus Geryon maritae Plesiopenaeus devardsianus ComoRIDAS Etaopterus plinax Mentocarinus africanus Geryon maritae Plesiopenaeus devardsianus ComoRIDAS Etaopterus plinax Mentocarinus africanus Geryon maritae Plesiopenaeus devardsianus ComoRIDAS Etaopterus plinax Mentocarinus africanus Geryon maritae Plesiopenaeus devardsianus ComoRIDAS Etaopterus belloci LOPHITIMAS Pentheroscion mbiri Scyllaride hertlotrii Arioma bondi	<pre>n) Purpos. Area c. GearCo. Validi 11820 m Sy : 113.2 CATCH Vight 100.80 77.20 110.00 5.36 4.28 2.80 2.00 1.76 1.44 1.20 0.76 1.44 1.20 0.76 2.25.48 YPE: BT No n) Purpos Area c GearCo. Validi 11200 m Sy : 123.3 CATCH Validh Validh Validh 149.50 26.50 7.70 6.50 5.50 6.50 5.50 4.10 3.60 1.76 2.50 7.70 0.45 0.45 0.50 0.50 0.50 0.50 0.50 0.5</pre>	16 POST 16 CODE: 16 CODE: 16 CODE: 16 CODE: 16 CODE: 17 CODE: 18 CODE	TIONILAT Long 2 1 1 Kn*10 4/HOUR: 4 OF TOT. C 44.51 34.09 7.7 4.42 2.37 1.24 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.78	S 1141 E 1318 226.48 : SAMP 508 509 (0N: 241 S 1142 E 1321 246.70 C SAMP
BLACK STOREST	<pre>>) Purpos. Area c GearCo Validi 11820 m Sj : 113.2 CATCH Veight 100.80 77.20 17.52 10.00 5.36 4.2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80</pre>	16 POST 1 code: 1 code: 2 code: 1 code: 2 code 1 code: 1 code: 2 code 1 code: 1 cod	TION HAT Long 2 1 hr + 10 H/HOUR: 4 OF TOT. C 44.51 34.09 7.74 4.42 2.37 1.24 0.63 0.34 0.54 0.54 0.53 0.34 0.54 0.54 0.53 0.34 0.54 0.54 0.54 0.53 0.34 0.55 0.54 0.54 0.54 0.55 0.54 0.54 0.54 0.55 0.54 0.55 0.54 0.55	S 1141 E 1318 226.48 : SAMP 508 509 (0N: 241 S 1142 E 1321 246.70 C SAMP

			ECT STATION	
	(PE: BT No:6	POSITI	ON:Lat 5 Long E	
start stop duration TIME :06:18:00 06:49:00 31 (min) Purpose	coder 3	Long L	1323
LOG :7822.90 7824.50 1.60	Area code			
FDEPTH: 206 206	GearCond.	. code :		
BDEPTH: 206 206	Validity	code: 1		
Towing dir: 345° Wire out:	600 m Spec	ndı 30 kı	*10	
	728.07	CATCH		9.17
Sorted: 34 Kg Total catch:	128.07	CATCE	BOOKI 140	13.11
SPECIES	CATCH/B	a nuc	OF TOT. C	SAMP
		unio e c s		
Synagrops microlepis	341.42	18331	24.23	
Chlorophthalmus atlanticus	318.35	8170	22.59	
Diaphus sp.	272.32	104011 854	19.32	
Trachurus trecae Merluccius polli	\$5.35	732	6.06	
Parapenaeus longirostris, fem.	52.43	9308	3.72	512
Parapenaeus longirostris, male	48.37	10365	3.43	511
Dentex macrophthalmus	30.89	163	2.19	
Iller coindetii	7.32	81	0.52	
Pterothrissus belloci	6.10	41	0.43	
Nematocarcinus africanus	2.85	1870	0.20	
Zenopsis conchifer	2.44	41	0.17	
Trichiurus lepturus	1.63	41	0.12	
Total	1407.24		99.85	
Iotai	1407124		,,,,,,	
DATE: 18/ 9/94 GEAR T			JECT STATIO	
start stop duration TIME :07:43:00 03:15:00 32 (mi) LOG :6828:70 6830.20 1.50 FDEPTH: 128 134	Area cod GearCond	coder 3 e 12 .coder	ION:Lat S Long E	1141 1328
start stop duration TINE :07:43:00 08:15:00 32 (mi) LOG :6928.70 68:30.20 1.50 FDEFTH: 128 134 BDEFTH: 129 134	n) Purpose Area cod	code: 3 e : 2 .code: code: 1	Long E	
start stop duration TINE :07:43:00 08:15:00 32 (mi) LOG :6928.70 68:30.20 1.50 FDEFTH: 128 134 BDEFTH: 129 134	n) Purpose Area cod GearCond Validity 375 m Spec	code: 3 e : 2 .code: code: 1	Long E n*10	
TINE :07:43:00 08:15:00 32 (ai) LOG :6828.70 6830.20 1.50 FDETTH: 128 134 BDETTH: 128 134 Towing dir: 165* Vire out:	n) Purpose Area cod GearCond Validity 375 m Spec	code: 3 e : 2 .code: code: 1 ad: 29 kr CATCH.	Long E n*10	1328
TINE :07:43:00 03:15:00 32 (ai) LOG :6428:70 63:0.20 1.50 FDEPTH: 128 134 BDEPTH: 128 134 Towing dir: 165* Vire out: Sorted: 65 Kg Total catch	n) Purpose Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H	code: 3 e : 2 .code: code: 1 ad: 29 kr CATCH.	Long E 1410 /HOUR: 196	1328 68.53 SAMP
TINE :07:43:00 03:15:00 32 (ai) LOG :6428:70 63:0.20 1.50 FDEPTH: 128 134 BDEPTH: 128 134 Towing dir: 165* Vire out: Sorted: 65 Kg Total catch	n) Purpose Area cod GearCond Validity 375 m Spec : 1049.88 CATCH/H weight n 1306.50	code: 3 code: 2 code: 1 code: 1 ad: 29 kr CATCH, OUR & where s 7620	Long E 10 10 0F TOT. C 66.37	1328 58.53 5MP 514
TINE :07:43:00 08:15:00 32 (ai LOG :6428.70 6830.20 1.50 FDETTH: 128 134 BDETTH: 128 134 Towing dir: 165* Vire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae	n) Purpose Area cod GearCond Validity 375 m Spec : 1049.88 CATCH/B weight n 1306.50 472.50	Coder 3 e 1 2 coder 1 coder 1 adr 29 kr CATCH, OUR 1 Mulbers 7620 2850	Long E 4*10 OF TOT. C 66.37 24.00	1328 68.53 SAMP
start stop duration TIME :07:43700 03:15:00 32 (ai UDC ::6828.70 6830.20 1.50 PDEPTH: 128 134 DDEPTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus treese Zeus fabor	n) Purpose Area cod GearCond Validity 1375 m Spec : 1049.88 CATCH/H weight n 1306.50 472.50 35.70	Coder 3 e 1 2 coder 1 coder 1 adr 29 kr CATCH, OUR 1 Mumbers 7620 2850 30	Long E 1*10 /HOUR: 190 OF TOT. C 66.37 24.00 1.81	1328 58.53 5MP 514
THE start stop duration THE 107:43100 08:15:00 32 (ai LOG :6828.70 6830.20 1.50 FDETH: 128 134 BDETH: 128 134 Towing dir: 165 Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zaus faber Brotula barbata	n) Purpose . Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H weight n 1306.50 472.50 35.70 32.40	coder 3 e 1 2 coder 1 coder 1 adr 29 kr CATCH, OUR 8 unbers 7620 2850 30 60	Long E 4*10 /HOUR: 190 OF TOT. C 66.37 24.00 1.81 1.65	1328 58.53 5MP 514
THE start stop duration TIME 107:43700 03:15:00 32 (ai DOE 1:6028.70 6830.20 1.50 PDEPTH: 128 134 DDEPTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus treese Zeus fabor Brotula barbata Grammoplitas gruveli	n) Purpose Area cod GearCond Validity 1375 m Spec : 1049.88 CATCH/H weight n 1306.50 472.50 35.70 32.40 30.53	Code: 3 t 2 code: 2 code: 1 code: 1 ad: 29 kr CATCH. OUR t 7620 2850 30 60 90	Long E 4*10 /HOUR: 194 OF TOT. C 66.37 24.00 1.91 1.65 1.55	1328 58.53 5MP 514
TIME :07:43100 08:15:00 32 (ai. LOG :6928.70 6930.20 1.50 PDEPTH: 128 134 BDEPTH: 128 134 Towing dir: 165 Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae 2005 faber Brotula barbata Grammophites gruveli Pterothrissus balloci	n) Purpose Area cod GearCond Validity : 375 m Sper : 1049.88 CATCH/B weight n 1306.50 472.50 35.70 32.40 30.53 22.80	Code: 3 • 1 2 • code: 1 code: 1 code: 1 code: 1 CATCH. OUR & umbers 7620 2850 30 60 90 300	Long E *10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.55 1.16	1328 58.53 5MP 514
THE START Stop duration TIME 107:43700 03:15:00 32 (ai. LOG :6828.70 6830.20 1.50 FDEFTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zeus faber Brotula barbata Grammoplitas gruveli Pterothrissus balloci Illes condetii	n) Purpose Area cod GearCond Validity 1 375 m Spec 1 1049.88 CATCH/H weight n 1306.50 472.50 35.70 32.40 30.53 22.80 20.70	Code: 3 t 2 code: 2 code: 1 code: 1 ad: 29 kr CATCH. OUR t 7620 2850 30 60 90	Long E 1*10 /HOUR: 194 OF TOT. C 66.37 24.00 1.91 1.65 1.55 1.16 1.05	1328 58.53 5MP 514
TIME 107:43:00 03:15:00 32 (ai) LOG :6928.70 6930.20 1.50 PDEPTH: 128 134 BDEPTH: 128 134 Towing dir: 165 Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zeus faber Brotula bacbata Grammophites gruveli Pterothrissus balloci Iller coindetii Scorpeana angolensis	n) Purpose Area cod GearCond Validity : 375 m Sper : 1049.88 CATCH/B weight n 1306.50 472.50 35.70 32.40 30.53 22.80 20.70 13.80	Code: 3 i 2 code: code: 1 ad: 29 kr CATCH, OUR 8 7620 2850 300 60 90 300 450	Long E *10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.55 1.16	1328 58.53 5MP 514
TIME 107:43:00 03:15:00 32 (ai. LOG :6828.70 6830.20 1.50 FDEFTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zeus faber Brotula barbata Grammoplitas gruveli Pterothrissus balloci Iller coindetii Scorpaena angolensis Torpedo torpedo	n) Purpose Area cod GearCond Validity 1 375 m Spec 1 1049.88 CATCH/H weight n 1306.50 472.50 35.70 32.40 30.53 22.80 20.70	Code: 3 • : 2 · code: code: 1 code: 1 code: 1 code: 1 code: 1 CATCH. OUR • CATCH. OUR • 000 000 000 000 000 000 000 0	Long E 10 /HOUR: 19 OF TOT. C 66.37 24.00 1.91 1.65 1.55 1.16 1.05 0.70	1328 58.53 5MP 514
TIME : 07:43:00 03:15:00 32 (ai) LOG :6928.70 6930.20 1.50 PDEPTH: 128 134 BDEPTH: 128 134 Towing dir: 165 Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zeus faber Brotula bacbata Grammophites gruveli Pterothrissus balloci Iller coindetii Scorpeana angolensis	n) Purpose , Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H 1306.50 472.50 32.40 30.53 22.80 20.70 13.80 10.50 7.80 7.80 7.80 7.80	code: 3 code: 3 code: 1 code: 1 code: 1 code: 1 cATCH. OUR CATCH. OUR CATCH. OUR 0 0 0 0 0 0 0 0 0 0 0 0 0	Long E +10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.16 1.05 0.70 0.53 0.40 0.11	1328 58.53 5MP 514
THE start stop duration TIME 107:43:00 08:15:00 32 (ai) LOG :6928.70 6930.20 1.50 PDEPTH: 128 134 DDEPTH: 129 134 Towing dir: 165 Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus treese Zeus fabe: Brotula barbata Grammophitas gruveli Pterothrisus balloci Iller coindetii Scorpean angolansis Torpedo torpedo LOPHITONE	n) Purpose Area cod GearCond Validity : 375 m Sper : 1049.88 CATCH/B weight n 1306.50 472.50 35.70 32.40 30.53 22.80 20.70 13.80 10.50 7.80	Code: 3 • : 2 • code: code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 2 code:	Long E 10 CHOUR: 19 OF TOT. C 66.37 24.00 1.81 1.65 1.55 1.16 1.05 0.70 0.53 0.40	1328 58.53 5MP 514
TIME :07:43:00 03:15:00 32 (ai. LOG :6828.70 6830.20 1.50 FDEFTH: 128 134 DEFTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zeus faber Brotula barbata Grammoplitas gruveli Pterothrissus balloci Iller coindetii Scorpaena angolensis Torpedo torpedo LOPHIIDAE Citharus Linguatula Trichiurus lepturus	n) Purpose , Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H 1306.50 472.50 32.40 30.53 22.80 20.70 13.80 10.50 7.80 7.80 1.80	code: 3 code: 3 code: 1 code: 1 code: 1 code: 1 cATCH. OUR CATCH. OUR CATCH. OUR 0 0 0 0 0 0 0 0 0 0 0 0 0	Long E +10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.16 1.05 0.70 0.53 0.40 0.11 0.09	1328 58.53 5MP 514
THE FORMULT Stop duration THE FORMULT STATE LOG :6328.70 6830.20 1.50 PDEPTH: 128 134 DDEPTH: 129 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Denter macrophthalmus Trachurus trecae Zeus fabr Brotula barbata Gramoplitas gruveli Pterothrissus belloci Iller coindetii Scorpens angolansis Torpedo torpedo LOPHIIDAF Citharus Linguatula Trichiurus lepturus Total	n) Furpose Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H weight n 1306.50 472.50 32.40 30.53 22.40 20.70 13.80 10.50 7.40 2.10 1.80	Code: 3 code: 1 code: 1 cod	Long E 10 (HOUR: 19) OF TOT. C 66.37 24.00 1.81 1.65 1.65 1.65 1.65 0.70 0.53 0.41 0.09 	1328 58.53 5MP 514 513
TIME :07:43:00 04:15:00 32 (ai. LOG :6828.70 6830.20 1.50 FUEFTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Tcachurus trecae Zeus faber Brotula bacbata Gramoplitas gruveli Pterothrissus belloci Iller condetii Scopsena angolanis Torpedo torpedo LOPHIIDAE Tichiurus lepturus Total	n) Purpose , Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H 1306.50 472.50 32.40 30.53 22.80 20.70 13.80 10.50 7.80 7.80 1.80	Code: 3 code: 1 code: 1 cod	Long E +10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.15 1.15 1.15 1.05 0.70 0.53 0.40 0.11 0.09 	1326 58.53 5MP 514 513 N: 244 1144
THE :07:43700 03:15:00 32 (ai. LOG :6328.70 6830.20 1.50 PDEPTH: 128 134 BDEPTH: 129 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zeus faber Brotula barbata Grammoplicas gruveli Pterothrispus belloci Illex coindetii Scorpaena angolansis Torpedo torpedo LOPHI IDAK Citharus Linguatula Trichirus lepturus Total	n) Furpose , Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/H weight n 1306.50 472.50 32.40 30.53 22.80 10.53 22.10 1.50 7.80 1.50 1.50 1.50 1.50 1.50 2.10 1.80	Code: 3 code: 1 code: 1 cod	Long E 10 (HOUR: 19) OF TOT. C 66.37 24.00 1.81 1.65 1.65 1.65 1.65 0.70 0.53 0.41 0.09 	1326 58.53 5MP 514 513 N: 244 1144
TIME :07:43:00 00:15:00 32 (ai. LOG :6828.70 6830.20 1.50 PUEPTH: 128 134 DDEPTH: 128 134 Towing diri 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus treese Zaus faber Brotula barbata Gramoplites gruvuli Pterothrisus balloci Iller coindetii Scorpaena angolensis Torpedo torpedo LOHHIDAE Tichiurus lepturus Total	n) Purpose , Area cod GearCond Validity; : 375 m Spec : 1049.88 CATCH/B weight n 1306.50 472.50 32.40 30.53 22.80 20.70 13.80 10.50 7.80 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 10.50 7.80 7.80 7.80 7.80 7.80 7.80 7.80 7.8	code: 3 code: 1 code: 3 code: 3 code: 3 code: 3 code: 3 code: 1 code:	Long E +10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.15 1.15 1.15 1.15 1.05 0.70 0.53 0.40 0.11 0.09 	1326 58.53 5MP 514 513 N: 244 1144
THE :07:43:00 03:15:00 32 (ai. LOG :6808.70 6830.20 1.50 PDEPTH: 128 134 DDETH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zaus fabor Brothesta Grammoplitas gruveli Pterothrisus belloci Iller coindetii Scorpaena angolensis Torpado torpedo LOPHIDAE LOPHIDAE Ticharus linguatula Trichirus lepturus Total	n) Furpose , Area cod GearCond Validity : 375 m Spec : 1049.88 CATCH/B weight n 1306.50 472.50 32.40 30.53 22.80 10.55 7.80 10.55 7.80 10.55 10.	Code: 3 code: 1 code: 3 code: 3 cod	Long E +10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.15 1.15 1.15 1.15 1.05 0.70 0.53 0.40 0.11 0.09 	1326 58.53 5MP 514 513 N: 244 1144
DATE: 18/9/94 GEAR T DATE: 18/9/94 GEAR T Cital GeAR T Constant Start Constant Start	n) Purpose , Area cod GearCond Validity; : 375 m Spec : 1049.88 CATCH/B weight n 1306.50 472.50 32.40 32.40 30.53 22.80 20.70 13.80 10.50 7.80 7.80 10.50 7.80 7.80 7.80 7.80 7.80 7.80 7.80 7.8	Code: 3 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 3 code: 3 code: 3 code: 3 code: 3 code: 3 code: 1 code: 1 cod	Long E +10 /HOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.16 1.05 0.70 0.53 0.40 0.11 0.09 	1326 58.53 5MP 514 513 N: 244 1144
DATE: 10 / 9/94 GEAR T TIME : 07:437:00 03:15:00 32 (ai. LOC : 16828.70 6830.20 1.50 PDEPTH: 128 134 DDEFTH: 128 134 Towing dir: 165' Wire out: Sorted: 65 Kg Total catch SPECIES Dentex macrophthalmus Trachurus trecae Zaus fabor Brothesta Gramoplitas gruveli Pterothrisus belloci Iller coindetii Scorpaena angolensis Torpido torpedo LOPHIIDAE Tichurus lepturus Total	n) Purpose , Area cod GearCond Validity; : 375 m Spec : 1049.88 CATCH/B weight n 1306.50 472.50 32.40 32.40 30.53 22.80 20.70 13.80 10.50 7.80 7.80 10.50 7.80 7.80 7.80 7.80 7.80 7.80 7.80 7.8	Code: 3 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 1 code: 3 code: 4 code: 3 code: 4 code: 4 cod	Long E 10 CHOUR: 194 OF TOT. C 66.37 24.00 1.81 1.65 1.55 1.16 1.65 0.70 0.53 0.40 0.11 0.09 99.42 JECT STATIO ION:Lat S Long E	1326 58.53 5MP 514 513 N: 244 1144

Sortad: 62 Kg Total ca	tch: 310.3	0 CATC	H/HOUR: 6	20.60
SPECIES	CATCH	/HOUR	or tot. c	SAMI
	weight	numbers		
Trachurus trecae	277.00	2408	44.63	51
Dentex macrophthalmus	103.00	580	16.60	514
Pagellus bellottii	71.60	390	11.54	51'
Denter canariensis	37.60	270	6.06	
Trichiurus lepturus	33.00	140	5.32	
Sepia sp.	33.00	50	5.32	
Raja miraletus	19.10	30	3.08	
Rhinobatos albomaculatus	6.70	10	1.00	
Epinephelus goreensis	6.30	10	1.02	
Parapristipoma octolineatum	5.30	10	0.85	
Chelidonichthys capensis	5.20	50	0.84	
Denter angolensis	5.10	40	0.82	
Umbring canariensis	4.80	50	0.77	
Octopus sp.	4.60	10	0.74	
Zeus faber	4.10	20	0.66	
Chaetodon hoefleri	3.60	20	0.58	
Pseudupeneus prayensis	0.50	10	0.08	
Citharus linguatula	0.10	10	0.02	
Total	620,60		100.01	

DATE:18/ 9/94 GEAR TY			DJECT STATIO	
	PE: BT No:	o POS.		5 1152
start stop duration			Long	E 1313
TIME :11:25:00 11:55:00 30 (min				
LOG 16850.30 6851.80 1.50	Area co		2	
FDEPTH: 44 43		d.code:		
BDEPTH: 44 43		y code:		
Towing dir: 180° Wire out:	160 m. Sp	eed: 29	kn*10	
Sorted: 21 Kg Total catch:	21.13	CATO	CH/HOUR:	42.24
PECIES	CATCH	HOUR	& OF TOT. C	SAMP
	weight	numbers		
rachurus trecae	26.00	52	61.55	518
aja miraletus	\$.76	12	20.74	
corpaena stephanica	3.36	68	7.95	
RABS	1.16	18	2.75	
atrachoides liberiensis	0.88	2	2.08	
Guilla mantis	0.64	60	1.52	
ONGRIDAE	0.38	6	0.90	
etopus sp.	0.34	4	0.80	
llex coindetii	0.22	2	0.52	
epia sp.	0.20	2	0.47	
odaropsis eblanae	0.18	4	0.43	
helidonichthys gabonensis	0.12	2	0.28	
ntal	42.24		99.99	

	PROJECT STATION: 246
DATE: 10/ 9/94 GEAR TY	PE: BT No:6 POSITION:Lat 5 12
start stop duration	Long E 1338
TIME :13:13:00 13:43:00 30 (mir	a) Purpose code: 3
LOG 16860.40 6862.00 1.60	Area code : 2
FDEPTH: 60 62	GearCond.code:
BDEPTH: 60 62	Validity code: 1
Towing dir: 360° Wire out:	200 m Speed: 32 kn*10
•	•
Sorted: 46 Kg Total catch:	45.77 CATCH/HOUR: 91.54
SPECIES	CATCH/HOUR & OF TOT. C SAMP
	weight numbers
Trichiurus lepturus	23.70 644 25.89
Dentex canariensis	21.10 220 23.05 519
Dentex macrophthalmus	13.06 68 14.27 520
Sepia sp.	8.56 56 9,35
Cynoponticus ferox	6.10 2 6.66
Pomadasys incisus	5.02 54 5.48
Pagellus bellottii	2.98 22 3.26
Zeus faber	2.78 12 3.04
Raja miraletus	2.34 6 2.56
Trachurus trecae	1.28 74 1.40
Umbrina canariensis	0.94 18 1.03
Sparus auriga	0.84 2 0.92
Cynoglossus sp.	0.74 4 0.81
Citharus linguatula	0.48 24 0.52
Atractoscion acquidens	0.46 2 0.50
Scorpaena stephanica	0.46 6 0.50
Penaeus notialis	0.32 12 0.35
Aulopus cadenati	0.28 6 0.31
Torpedo torpedo	0.10 2 0.11
Total -	91.54 100.01

		PROJECT STATI	ON: 247
DATE: 18/ 9/94 GEAR TY	PE: BT No:6 P	OSITION: Lat	5 1201
start stop duration			E 1330
TIME :15:00:00 15:30:00 30 (min) Purpose code		
LOG :6870.80 6872.40 1.60	Area code	: 2	
FDEPTH: 109 102	GearCond.cod	e: _	
BDEPTH: 109 102	Validity cod	a: 1	
Towing dir: 200° Wire out:			
Sorted: 38 Kg Total catch:	37.86 C	ATCH/HOUR:	75.72
SPECIES	CATCH/HOUR	N OF TOT. C	SAMP
	weight numbe	5	
Dentex angolensis		32 45.43	522
Trachurus trecae	7.60	18 10.04	523
Raja miraletus	4.60	12 6.08	
Squatina oculata	4.36	2 5.76	
Raja straeleni	3.56	2 4.70	
Dentex macrophthalmus	3.36	20 4.44	521
Zeus faber	3.08	8 4.07	
Branchiostegus semifasciatus	2.48	2 3.28	
Sparus auriga	2.36	4 3.12	
Batrachoides liberiensis		12 2.43	
Brotula barbata	1.36	2 1.80	
Todaropsis eblanae		60 1.74	
Dentex canariensis		12 1.48	
Dentex barnardi	0.98	2 1.29	
Sepia sp.	0.68	8 0.90	
Dentex congoensis	0.54	6 0.71	
Citherus linguatula		16 0.69	
Peristedion cataphractum		10 0.69	
Chaetodon hoefleri	0.32	2 0.42	
Iller coindetii		10 0.34	
Scorpaena angolensis	0.18	2 0.24	
Microchirus frechkopi	0.12	2 0.16 2 0.13	
Lepidotrigla carolae	0.10		
Scorpaena normani	0.06	2 0.08	
Total	75.72	100.02	

		PROJ	ECT STATION	: 248
start stop duration	PE: BT Noi6		LON:Lat 5 Long E	1200
TIME :16:42:00 17:12:00 30 (mir LOG :6876.00 6877.50 1.50	 Purpose Area cod 	code: 3 le : 2	-	
FDEPTH: 231 236 BDEPTH: 231 236	GearCond			
	700 m Spe	ed: 30 k	a*10	
Sorted: \$7 Kg Total catch:	1098.38	CATCH	HOUR: 21	96.76
SPECIES	CATCE/B	DUR 1	ог тот. с	SAMP
Merluccius polli	weight n 708.96	3596	32.27	525
Chlorophthalmus atlanticus Dentex macrophthalmus	548.18 459.54	13698 1898	24.95 20.92	524
Trachurus trecae MACROURIDAE	192.18 49.88	760 2254	8.75	526
Zenopsis conchifer	49.36	254	2.27	
Pterothrissus belloci Scorpaena normani	32.90 29.36	228	1.50	
Pentheroscion mbizi Dentex barnardi	23.54 20.24	1772 26	1.07	
Erythrocles monodi Todaropsis eblanae	19.24 18.72	26 228	0.88	
Stromateus fiatola Parapenaeus longirostris	14.68 11.14	26	0.67 0.51	
Spicara alta C R A B S	5.56 5.30	26 506	0.25	
Trichiurus lepturus Peristedion cataphractum	5.06 2.26	26 26	0.23	
CRABS	0.50	26	0.02	
Total	2196.60		99.99	
	PE: BT Note		DECT STATIO	1159
start stop duration TIME :18:02:00 18:31:00 29 (min		code: 3	Long E	1328
LOG :6881.70 6882.80 1.10 FDEPTH: 334 334	Area cod GearCond			
BDEPTH: 334 334	Validity 1000 m Spe	code: 1	*10	
Sorted: 30 Kg Total catch:	-			73.78
		- CHICK	30081 3	
SPECIES	CATCH/H weight n	OUR 1	OF TOT. C	SAMP
Chlorophthalmus atlanticus	297.31	5499	79.54	
Gephyroberyx darwini Pterothrissus belloci	20.98	25 87	5.61 3.99	
Laemonema laureysi Merluccius polli	12.91	186 50	3.45 2.39	
NACROURIDAE Zenopsis conchifer	5.71 5.46	410 37	1.53	
Parapenasus longirostris, fem. S H A R K S	4.10	422 62	1.10	527
Halosaurus sp. Illex coindetii	0.87	37 12	0.23	
C R A B S Nematocarcinus africanus	0.50	37 87	0.13	
Synagrops microlepis	0.12	12	0.03	
Total	373.79		99.99	
Totel –		PRO		N: 250
DATE: 18/ 9/94 GEAR TY		PRO POSIT	JECT STATIO	1201
DATE:18/ 9/94 GEAR TY start stop duration TIME :20114:00 20:45:00 31 (mair	373.79 (PE: BT No:6) Purpose	code: 3	JECT STATIO	1201
DATE:18/ 9/94 GEAR T1 start stop duration TIME :20:14:00 20:45:00 31 (min LOG :6883.00 6889.60 1.60 FØEFTH: 467 475	373.79 (PE: BT No:6) Purpose Area cod GearCond	code: 3 le : 2 l.code:	JECT STATIO	1201
DATE:18/9/94 GEAR T) start stop duration TIME :20:14:00 20:45:00 31 (min LOG :0488.00 6489.60 1.60 FDETTH: 467 475	373.79 (PE: BT No:6) Purpose Area cod GearCond	code: 3 le : 2 l.code: code: 1	JECT STATIO ION:Lat S Long E	1201
DATE:18/9/94 GEAR T) start stop duration TIME :20:14:00 20:45:00 31 (min LOG :6488.00 6489.60 1.60 FDEFTH: 467 475	373.79 (PE: BT No:6) Purpose Area cod GearCond Validity 1300 m Spe	code: 3 le : 2 l.code: code: 1 code: 1 ed: 30 ki	DECT STATIO ION:Lat S Long E 10	1201
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DATE:18/9/94 GEAR T) start stop duration TIME :20:14:00 20:45:00 31 (ai LOG :6889.60 689.60 1.60 FDEPTH: 467 475 DEPTH: 467 475 Towing dir: 180° Wire out: Sorted: 26 Kg Total catch: SPECIES	373.79 7PE: BT Nor6 Area cod GearCond Validity 1300 m Spe : 104.80 CATCH/H weight n	code: 3 ie : 2 i.code: code: code: 1 ed: 30 ki CATCH.	JECT STATIO ION:Lat S Long E 10 /HOUR: 2 OF TOT. C	1201 1325 02.84 SAMP
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Annex IV 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:

Tranceiver settings:

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

Printer settings:

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

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

A calibration experiment using a standard copper sphere, performed in Baia dos Tigres 4/6 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 volum backscattering strength.

Ts Transducer gain: Peak transducer gain assumed during computation of 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

The vessel has two different sized 'Åkrahamn' pelagic trawls and one Gisund super bottom trawl. Only the bottom trawl was used during the survey.

The bottom trawl has a headline of 31m, footrope 47m and 20mm meshsize in the codend with an innernett of 10mm meshsize. The estimated headline hight is 5m and distance between wings during towing about 18m. The trawl is equiped with a 12" rubber bobbins gear. During the present survey two 7.81 m², 1670kg 'Thyborøn' combi-doors were used on the trawl. The sweeps are 40m long.

The following drawing show the size of the trawl:

