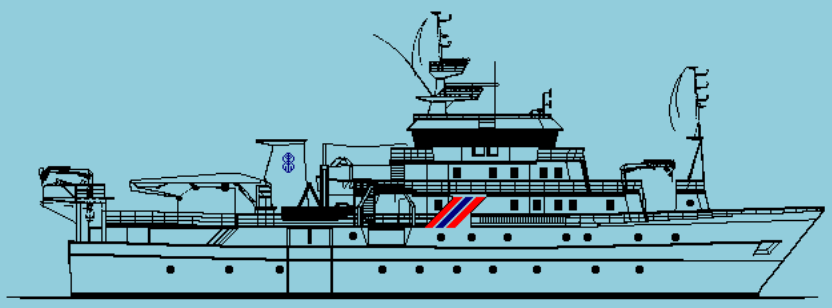

2007 BENEFIT SURVEY NO. 1

TRANSBOUNDARY SURVEY BETWEEN NAMIBIA AND SOUTH AFRICA WITH FOCUS ON SHARED STOCKS OF HAKE

Cruise report No 1/2007

10 January – 5 February 2007

by

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THE EAF-NANSEN PROJECT

FAO started the implementation of the project "Strengthening the Knowledge Base for and Implementing an Ecosystem Approach to Marine Fisheries in Developing Countries (EAF-Nansen GCP/INT/003/NOR)" in December 2006 with funding from the Norwegian Agency for Development Cooperation (Norad). The EAF-Nansen project is a follow-up to earlier projects/programmes in a partnership involving FAO, Norad and the Institute of Marine Research (IMR), Bergen, Norway on assessment and management of marine fishery resources in developing countries. The project works in partnership with governments and also GEF-supported Large Marine Ecosystem (LME) projects and other projects that have the potential to contribute to some components of the EAF-Nansen project.

The EAF-Nansen project offers an opportunity to coastal countries in sub-Saharan Africa, working in partnership with the project, to receive technical support from FAO for the development of national and regional frameworks for the implementation of Ecosystem Approach to Fisheries management and to acquire additional knowledge on their marine ecosystems for their use in planning and monitoring. The project contributes to building the capacity of national fisheries management administrations in ecological risk assessment methods to identify critical management issues and in the preparation, operationalization and tracking the progress of implementation of fisheries management plans consistent with the ecosystem approach to fisheries.

LE PROJET EAF-NANSEN

La FAO a initié la mise en oeuvre du projet "Renforcement de la base des connaissances pour mettre en œuvre une approche écosystémique des pêcheries marines dans les pays en développement (EAF-Nansen GCP/INT/003/NOR)" en décembre 2006. Le projet est financé par de l'Agence norvégienne de coopération pour le développement (Norad). Le projet EAF-Nansen fait suite aux précédents projets/ programmes dans le cadre du partenariat entre la FAO, Norad et l'Institut de recherche marine (IMR) de Bergen en Norvège, sur l'évaluation et l'aménagement des ressources halieutiques dans les pays en développement. Le projet est mis en oeuvre en partenariat avec les gouvernements et en collaboration avec les projets grands écosystèmes marins (GEM) soutenus par le Fonds pour l'Environnement Mondial (FEM) et d'autres projets régionaux qui ont le potentiel de contribuer à certains éléments du projet EAF-Nansen.

Le projet EAF-Nansen offre l'opportunité aux pays côtiers de l'Afrique subsaharienne partenaires de recevoir un appui technique de la FAO pour le développement de cadres nationaux et régionaux visant une approche écosystémique de l'aménagement des pêches et la possibilité d'acquérir des connaissances complémentaires sur leurs écosystèmes marins. Ces éléments seront utilisés pour la planification et le suivi des pêcheries et de leurs écosystèmes. Le projet contribue à renforcer les capacités des administrations nationales responsables de l'aménagement des pêches en introduisant des méthodes d'évaluation des risques écologiques pour identifier les questions d'aménagement d'importance majeure ainsi que la préparation, la mise en œuvre et le suivi des progrès de la mise en œuvre de plans d'aménagement des ressources marines conformes à l'approche écosystémique des pêches.

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1 Introduction

One of the key areas of the BCLME focus is the monitoring/assessment of major transboundary fish resources in the BCLME region to enable sustainable management of these resources. The biological and ecological dynamics of deepwater hake have come under spotlight in stock assessment of these resources. BCLME programme has therefore been involved in supporting appropriate research that could contribute to conservation and management efforts of this transboundary fish resource. During the bridging phase of the BENEFIT project (2006-2007) the BENEFIT resources working group has decided to link must of the BENEFIT work up to the long term needs for the management of the transboundary stocks and upkeeping the joint surveys with Namibia early in the year has been given priority. Hence this survey. Similar surveys have been carried out in 2003, 2005 and 2006.

Specific objectives of the survey are:

1. To plan and conduct a transboundary survey from Cape Agulhas to Orange River to produce distribution maps and abundance estimates of the two species of hake to be later merged with similar data from a co-occurring Namibian national demersal survey, to enable complete mapping and assessment of shared stocks, thus providing a measure of the degree of sharing of the stocks at the time of the survey.
2. To do plankton sampling at transects along the coast in the southern region to check if there would be eggs and larvae of the two hake species present in the sea at the time of the survey as evidence of spawning activity
3. To collect data on the maturity stages of the hakes to check for possible spawning activity.
4. To collect other relevant data to better understand the environment impact on the distribution of hakes, and the fish community structure in the distribution areas of the hake. The environment data will be analysed later.

2 Materials and methods

2.1 Registration of weather conditions

The underway weather data aboard Dr. Fridtjof Nansen are logged with the Aanderaa Weather Station unit fitted with the following sensors:

Sensor type	Measurement units
Air temperature	Degrees °C
Wind speed	M/s
Solar radiation	W/m^2
Wind direction	Degrees re. the magnetic N. Pole
Sea surface temperature	Degrees °C

All sensors but Sea surface temperature (SST) are mounted on a mast positioned midships, at about 20 meters above the sea level. The SST sensor is located at the intake of the water for cooling the engine and it readings are representative to a water layer at about 5 meters below the sea level.

The weather station data were logged continuously throughout the survey. The results presented in this report are based on a standard output from the logging system comprising one nautical mile averages along the ship's track.

2.2 Hydrography

The data on temperature salinity and oxygen were collected with a CTD *Seabird 9 plus* probe between the surface and 10 meters off the bottom. CTDs were made at each trawl station. In addition, water bottle samples for oxygen and salinity calibrations were taken at most CTD stations.

The salinity samples were analysed with the Guildline Portasal salinometer unit. The laboratory conditions onboard are suitable to detect deviations between the CTD and *in situ* samples at a level of 0.005 of salinity units. Since no deviations reaching or exceeding this range were detected, the salinity values based on the factory calibration of the conductivity sensor are used throughout this report.

The samples for dissolved oxygen were titrated within 12 hours of sample collection, using the standard Winkler method.

2.3 Current measurements.

Current measurements were carried out with vessel-mounted acoustic Doppler current profiler (ADCP) by RD Instruments, which operated 150 kHz in broad-band mode with 5 m vertical cells. Currents were measured from a depth of 25 m down to about 30 meters above the bottom. Only the bottom-tracked data were used in the data analysis.

2.4 Plankton sampling and processing

2.4.1 *Multinet plankton sampler*

Eggs, larvae and zooplankton were sampled with a Multinet plankton sampler from Hydrobios. The plankton sampler has 5 nets with a mesh size of 405 μm. The opening of the plankton sampler is 0.5 x 0.5 m. A flow meter was mounted in the opening of each net to measure the filtered volume. A Scanmar depth recorder with acoustic transmission to the vessel was mounted on top of the Multinet. The depth intervals used during this survey were 0 - 50 m, 50 – 100 m, 100 – 150 m, 150 – 200 m and 200 – 10 m above bottom (maximum 600 m). When bottom depth was less than 200 m, the deepest net sampled from 10 m above the bottom to the nearest depth interval.

2.4.2 Processing of ichthyoplankton

After removing the cups from the Multinet the samples were transferred into petri dishes and examined under a stereomicroscope. All fish larvae and fish eggs were removed from the sample while the major zooplankton species were recorded. The fish larvae were identified using the key of Olivar and Fortuño (1991). Since it is not possible to distinguish between the two hake species on the egg and larval stage, all hake eggs and larvae were preserved in either liquid nitrogen or 96% alcohol for genetic analyses. All fish larvae were counted and the standard length of hake larvae was measured before they were preserved. Fish eggs were identified, counted and staged and all hake eggs were removed from the sample and preserved.

2.5 Acoustic measurements

2.5.1 Acoustic equipment

The acoustic recordings were conducted using Simrad EK 500 echosounder coupled to a keel-mounted transducer of 38 kHz. Acoustic raw-data was logged on the Sun-Unix based Bergen Echo Integrator (BEI) version 2000. The technical specifications and operational settings of the echosounders used during the survey are given in Annex 2 together with the results from the last calibration of the system. The acoustic data were scrutinized using the post-processing module of the LSSS software, developed by IMR.

2.5.2 Classification

Scatterers were displayed at 38 kHz, standardized to 5 nautical miles (NM) echograms with 1,000 pings (horizontal) by 500 bins (vertical). The mean 5 NM area backscattering coefficients s_A (m^2/NM^2) was allocated to a predefined set of species or species groups on the basis established echogram features. When concentrations of juvenile pelagic hake were encountered the s_A-values were stored with a 1 NM resolution.

Acoustic groups used were: a) Juvenile pelagic hake < 17 cm, b) older hake, usually demersal, c) horse mackerel, d) Pelagic group1 (pilchard, anchovies, red eye), e) Pelagic group 2 (pelagic fish not of Pelagic 1), f) demersal fish, not hake, g) mesopelagic fish, h) plankton. The classification was based on the characteristics of the echo traces, experience accumulated from previous similar surveys in Namibia since 1990 and in South Africa since 2000, supported when possible with results from nearby bottom trawl stations. Time constraints did not permit pelagic trawling on targets.

The results from the acoustic system are considered as a pilot study with the main aim of delineating the limits of distribution of juvenile pelagic hake and some information on relative densities. The figures will not be converted to biomass, as the target strength is uncertain and as the classification scheme and methods are too course for such a purpose. Adult hake were very rarely observed in the acoustic channel during daytime, while it showed up frequently above bottom at nighttime.

2.6 Trawl sampling procedures

The standard bottom trawl of Dr. Fridtjof Nansen, a Gisund Super shrimp cum fish trawl, was used in the survey and for the intercalibration. A description of the trawl and gear is given in Annex 2. Dr. Fridtjof Nansen use a 20 m strapping on the warps 105 m

in front of the doors to keep the door and wingspread constant at 50 m and 21 m respective, independent of trawl depth.

A standard haul was 30 minutes at 3 knots, sometimes reduced to 20 minutes in areas of expected high densities. The exact time for start and stop of the trawl operation was determined by SCANMAR sensors. The output from the SCANMAR system was also recorded on files to facilitate later analysis of bottom contact and door-spread if necessary.

For conversion of catch rates (kg/hour) to fish densities (t/NM^2), the effective fishing area was considered as the product of the wing spread and the haul length, or distance over the bottom, based on GPS readings. In the survey a nominal distance of 18.5 m was applied to facilitate analysis with previous surveys. The area swept for each haul was thus 18.5 m times the distance trawled, converted to NM^2. The catchability coefficient (q), i.e. the fraction of the fish encountered by the trawl that was actually caught, was conservatively assumed equal to 1, to allow comparison with previous results.

2.6.1 Handling the catch

In most cases, the whole trawl catch was sorted and all species were recorded with their weight and numbers. For especially big catches the abundant species were sub-sampled while the other fish were sorted out. Length measurements (total length) were taken for target species. The length of each fish was recorded to the nearest 1 cm below. The mantle length of squid was measured to the nearest 1 cm below. All samples of small hake was checked for the species identity by vertebrae count (usually 3-5 fish were examined).

An electronic measuring board was used for length measurement, main sample weights were recorded by Scanvaegt electronic balances and a Marel weight was used for single fish and small species measurements.

2.6.2 Biological samples

Biological samples were collected for the two hake species in special areas. The following information were collected: Sex, maturity stage, gonad weight and stomach content. The maturity scale used was the one adopted at Marine and Coastal Management, Cape Town:

1: immature,

2: active,

3: ripe,

4: ripe and running,

5: spent and

6: inactive

3 Narrative

The scientific staff consisted of:

From MCM, South Africa:
Marek Lipinski (teamleader), Clifford Hart, Larry Hutchings (from 20.01), Sakhile Tsotsobe (until 20.01), Tebello Mainoane (from 20.01),
Other affiliations, South Africa:
Lara Atkinson (UCT), Samuel Mafwila (UCT), Kerry Sink (UCT, until 10.01), Bronwyn O'Connel (Rhodes Univ, until 20.01),
Interns, South Africa: Lucinda Fairhurst, Pierre Joubert, Michelle Malan
From Univ. of Bremen, Germany:
Britta Grote

From IMR, Norway:

Tore Strømme (cruise leader), Erling Kåre Stenevik (until 20.01), Oddgeir Alvheim, Tore Mørk, Terje Hovland and Åsmund Skålevik (from 20.01)

The cruise tracks with fishing, hydrographical and plankton multinet stations are shown in Figure 3.1.

The vessel departed Cape Town in the evening of 10 January, steaming south to False Bay where the sampling work commenced in the morning. The following day the southernmost transect was worked, then proceeding northwards with roughly one transect/day. A call was made at Cape Town on 19 January for crew change. Departure on 21st morning was cancelled due to failure in the gyro system, causing a delay until 23rd afternoon. Work proceeded northwards until 3 February evening when sampling was stopped one transect short of Orange river. The vessel arrived on schedule in Walvis Bay 5 February. Transects were laid out with 20nm distance and the bottom depth zone from 100 to 600 meters was covered. Plankton samples with multinet was taken at 7 transects between Cape Agulhas and Hodeklip Bay.The weather conditions were for long periods somewhat unfavourable, with sample work slowed down, but never interrupted. Due to the delay in Cape Town some stations in the shallow waters between St. Helena Bay and Hondeklip Bay had to be omitted, as well as the northernmost transect close to the Orange River.
As a separate task two PhD students from UCT collected epibenthos from the trawl samples in order to have a pilot study on this fauna. This will be followed up more

intensively in later fieldwork and the analysis of this material is not the issue of this report.

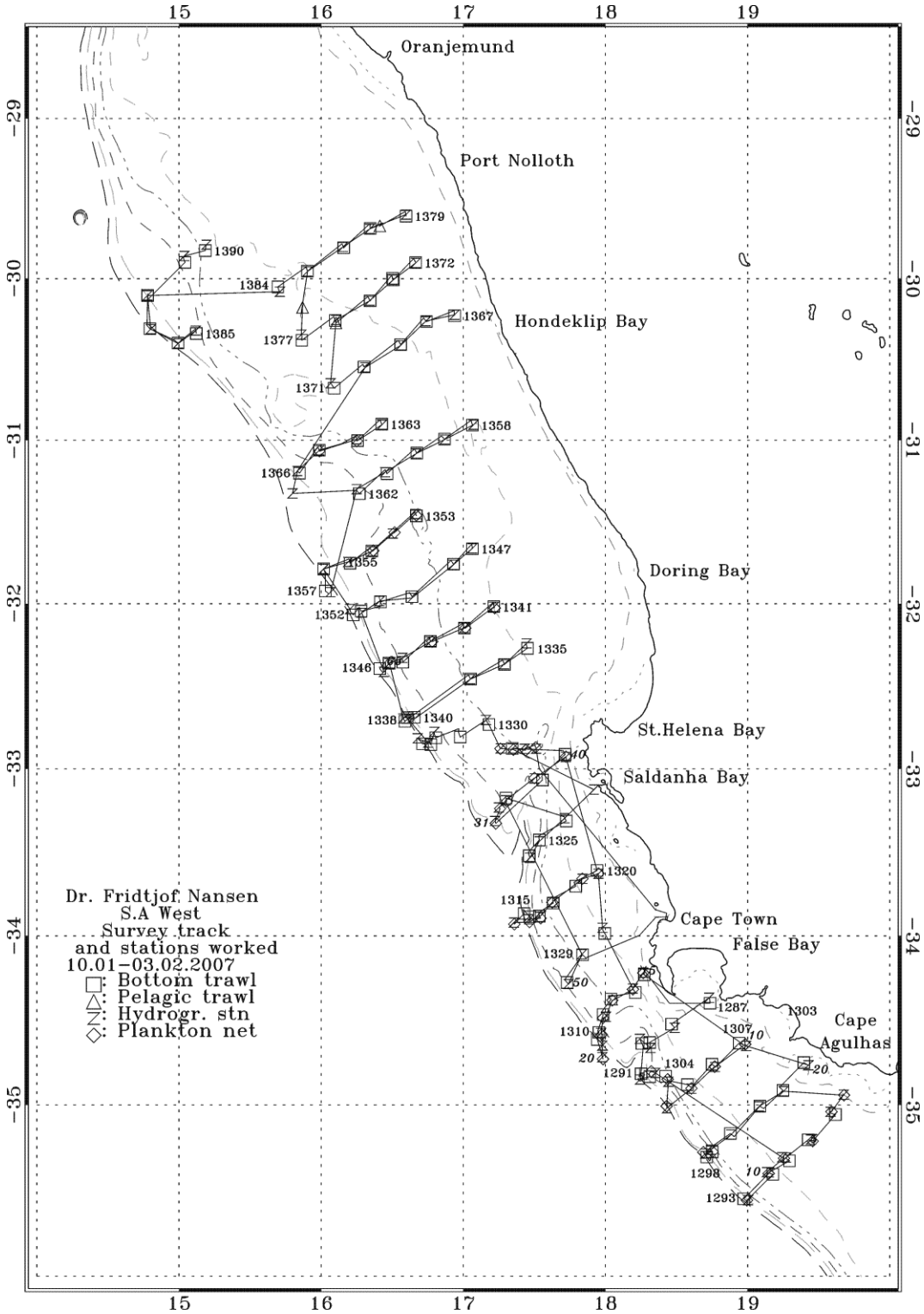


Figure 3.1 Course tracks and fishing, hydrographic and plankton multinet stations.

4 Results

4.1 Hydrography

Figure 4.1 shows the surface temperature in the survey area. Due to manpower and resources constraints there could be no further analysis of the hydrographical data for this report. All data are stored and are awaiting later analysis.

4.2 Ichthyoplankton

Since the results from the genetic analyses was not available when the report was written it was impossible to distinguish between the two species of hake when the distributions of eggs and larvae are presented.

4.2.1 Horisontal distribution

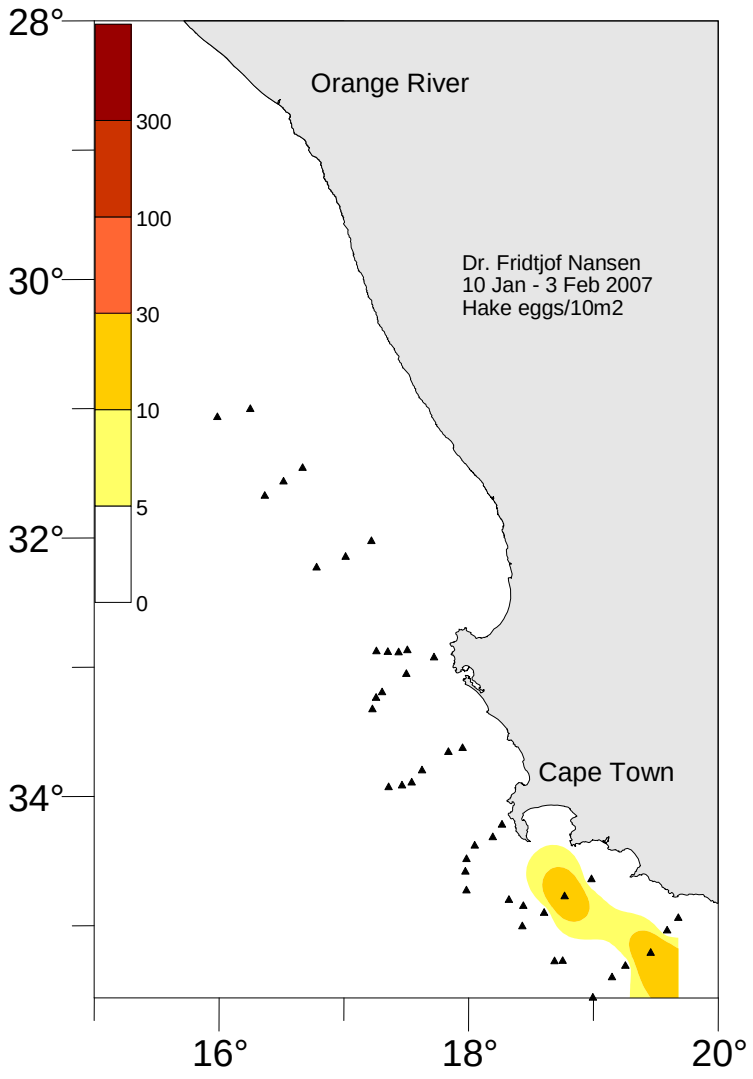


Figure 4.1. Horizontal distribution of hake eggs

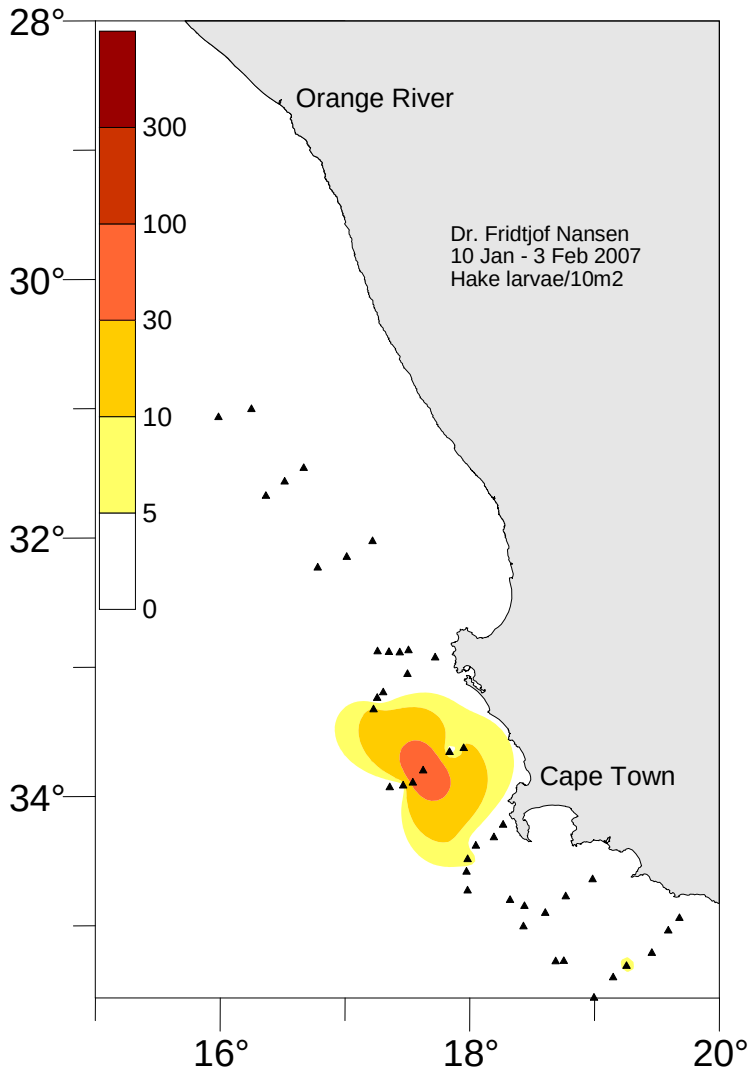


Figure 4.2. Horisontal distribution of hake larvae

During the survey, 42 Multinet stations were taken from the Western Agulhas Bank to around 31°S. Hake eggs and larvae were scarce. Hake eggs were found on only two stations in the southern part of the sampling area, Figure 4.1 while hake larvae were found farther north, Figure 4.2, between Cape Town and Cape Columbine. The distribution of larvae farther north than the eggs indicated a northward transport from the spawning areas.

4.3 Biology

Annex 1 shows the complete record of the fishing stations and Annex 2 shows in table form the catch rates of the two hake species grouped by juveniles (<21 cm) and bigger fish. Figure 4.3 shows the distribution of deep water hake (*M. paradoxus*) in the survey area. Dense concentrations of adult fish are found on the slope between Cape Agulhas and north to 31°N. Dense concentrations of juvenile fish are found mid-shelf between St. Helena Bay Hondeklip Bay, suggesting a 'gate' to the slope off St. Helena Bay. In contrast to earlier years the high densities of young fish does not seem to spill over the Orange Banks and into Namibia. The distribution of shallow water hake (*M. capensis*) is more uniform (Fig. 4.4) and at low level. One concentration was found on the shelf between Cape Agulhas and False Bay. It should be noted that usually one finds the highest densities of shallow water hake in the shallow waters between St. Helena Bay and Doring Bay and off Port Nolloth and north into Namibia. Due to time constraints these areas had to be omitted during the survey thus not giving the complete distribution of the shallow water hake. This limitation does nor apply to the deep water hake as is has a deeper distribution.

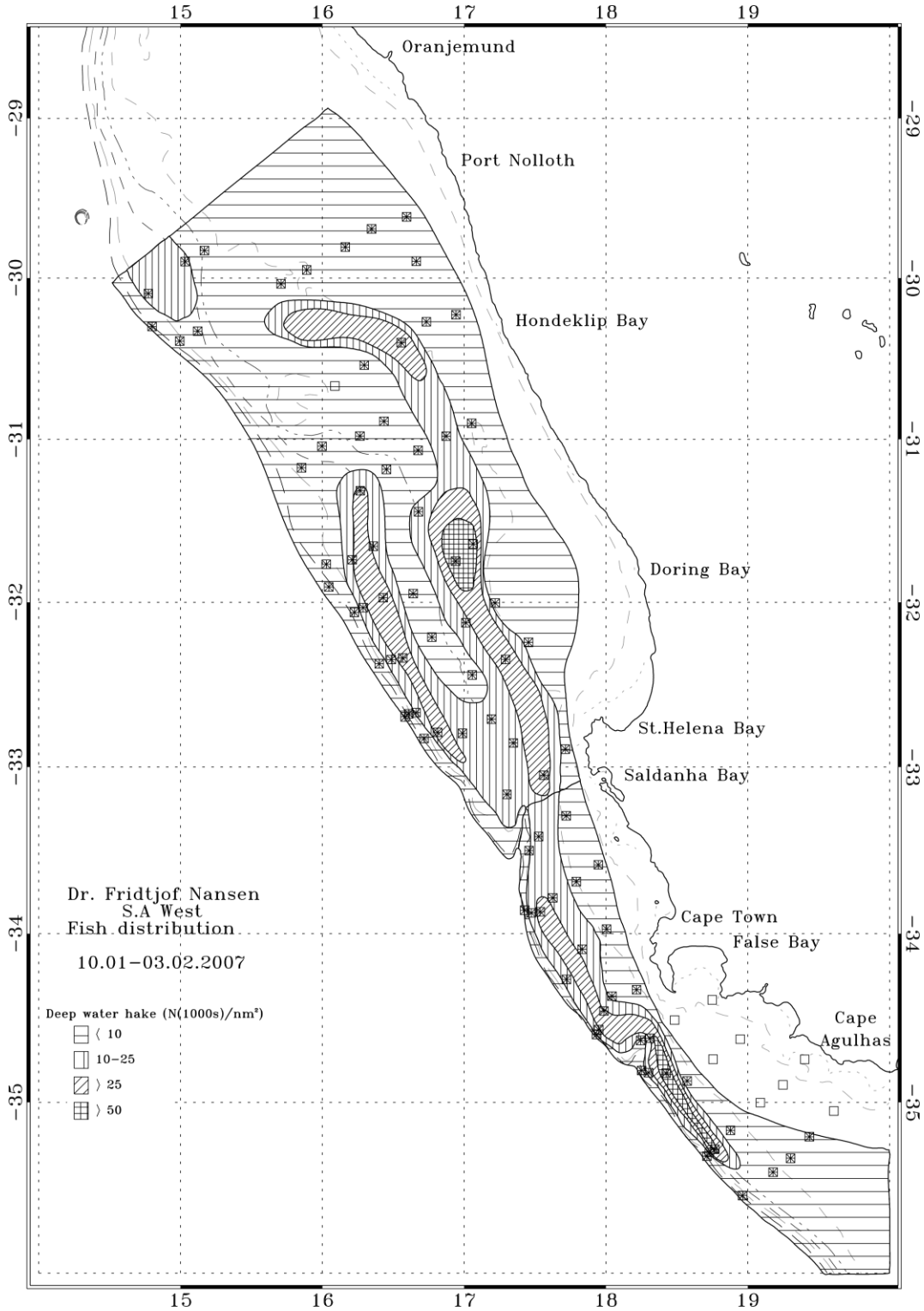


Figure 4.3 Distribution of deep-water hake (*Merluccius paradoxus*) in January-February 2007.

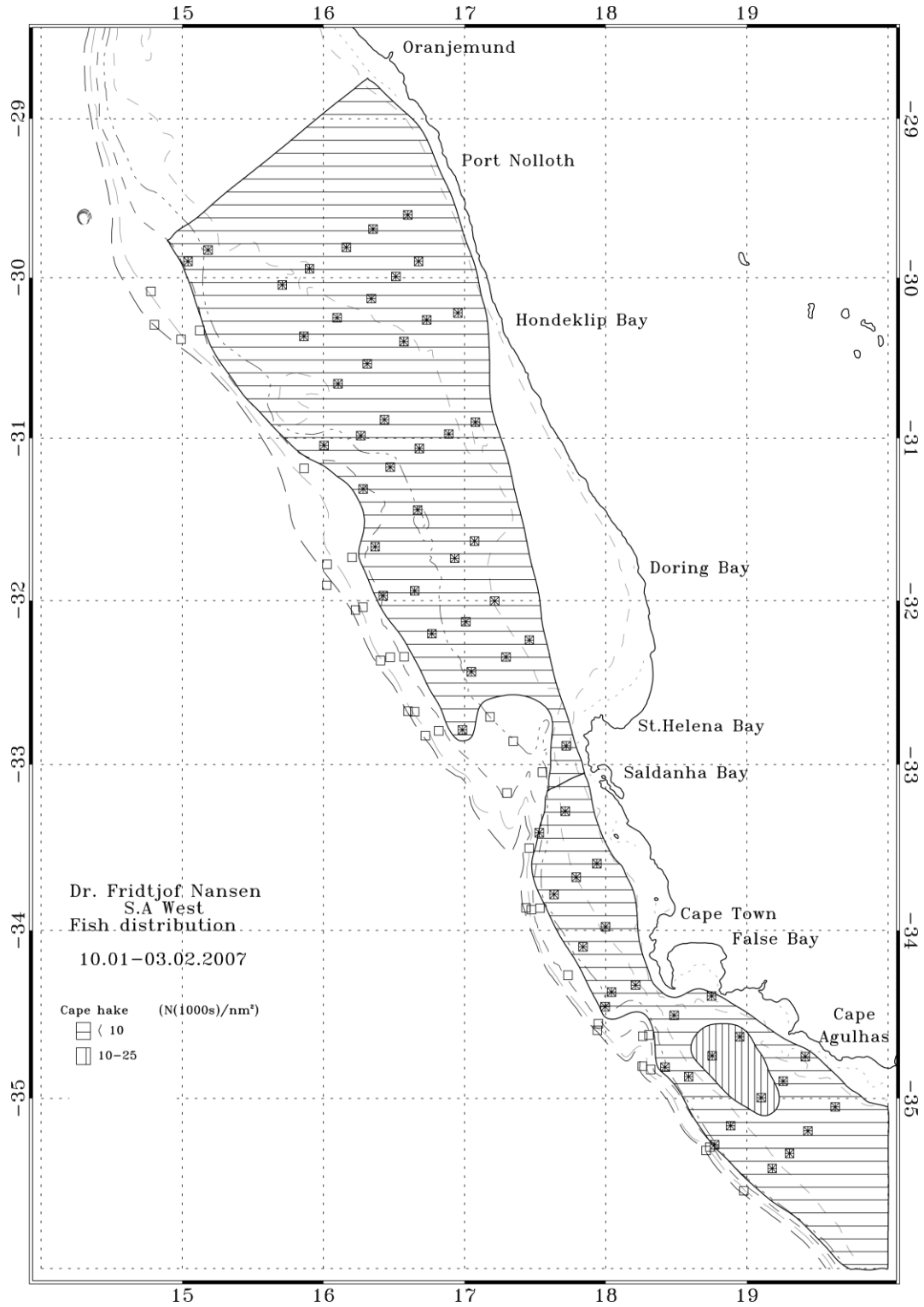


Figure 4.4 Distribution of Cape hake (*Merluccius capensis*) in January-February 2007. Note: The survey does not cover the shallow waters St. Helena Bay – Hondeklip Bay, an important habitat for Cape hake. The distribution map is therefore not complete.

The density estimates from the point samples have been converted into biomass estimates by length classes. The similar data from the Namibian trawl survey that was

running at the same same have been processed following the same procedures. The joint estimates on deep water hake are shown in Table 4.1. Figure 4.5 shows the 6combining the Namibian and South African data. Figure 4.6a shows a graphical representation of the estimates by numbers of deep water hake, with the Namibian estimates stacked on top of the South African while Fig 4.b shows the % share of the biomass of the respective countries in numbers by length.

Table 4.1 Abundance estimates of *M. paradoxus*.

Length	Biomass in tonnes			Number in millions		
	Namibia	S. Africa	Total	Namibia	S. Africa	Total
0	0	0	0	0	0	0
5	206	71	277	54	18	71
10	890	1955	2845	83	147	230
15	1928	29608	31536	59	822	881
20	22754	74051	96805	321	1072	1393
25	27814	86976	114790	226	712	938
30	22680	35486	58165	105	172	277
35	27918	31815	59733	87	98	185
40	15814	19378	35191	34	41	75
45	12242	10763	23005	18	16	35
50	10834	7185	18018	12	8	20
55	3865	7960	11825	3	7	10
60	1020	4425	5446	1	3	4
65	63	3375	3439	0	2	2
70	0	791	791	0	0	0
75	0	318	318	0	0	0
80	0	0	0	0	0	0
85	0	256	256	0	0	0
90	0	0	0	0	0	0
95	0	0	0	0	0	0
100	0	0	0	0	0	0
Total	148028	314412	462440	1002	3128	4120
Non-fishable	82000	235000	317000	867	2965	3832
Fishable	66000	80000	146000	134	153	287

Table 4.2 shows the density estimates of *M. paradoxus* by bottom depth strata and by regions, three regions in Namibia and four in South Africa. Table 4.3 shows the similar

data for M. capensis. The areas of these depth strata and regions are listed in Annex 3.

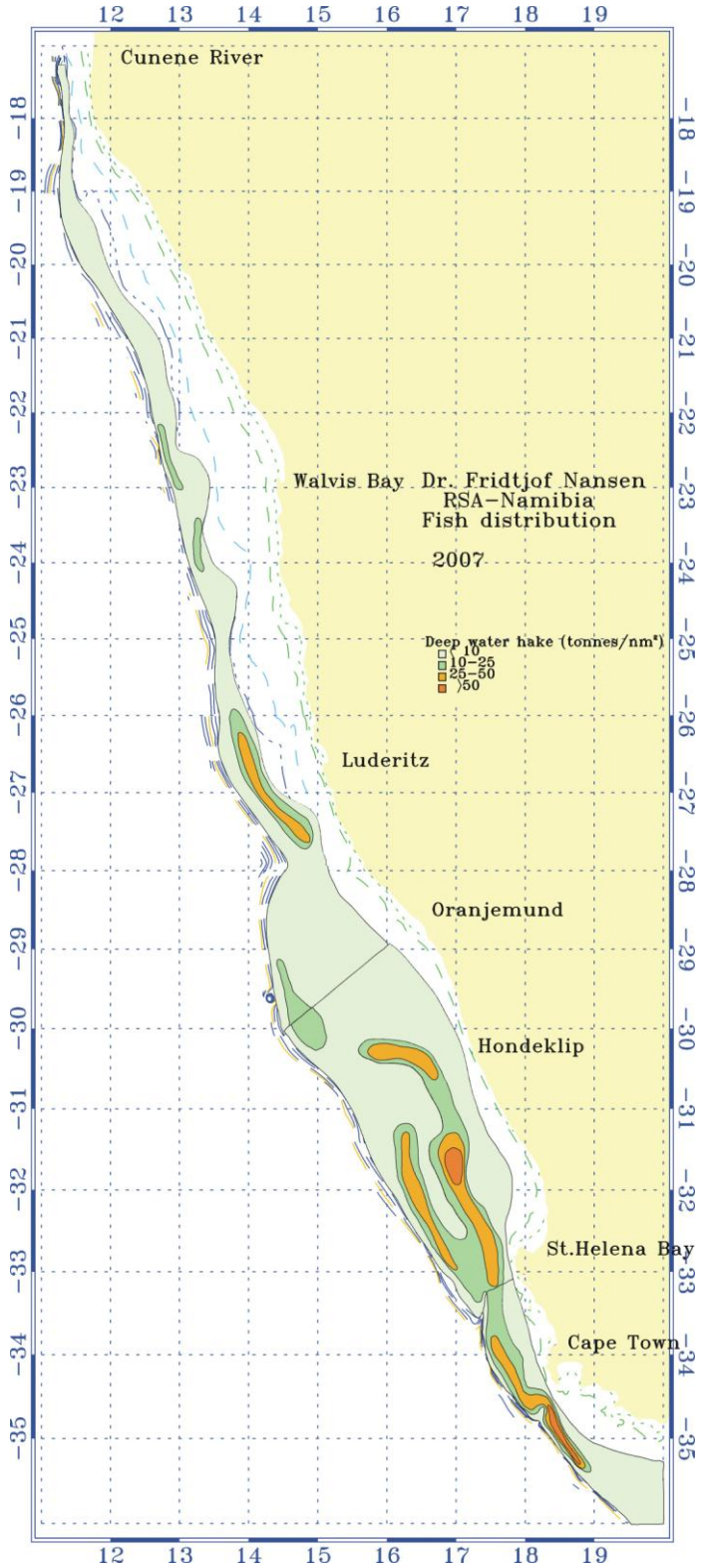


Figure 4.24 Distribution of deep-water hake (*M. paradoxus*) from Cunene to Cape Agulhas.

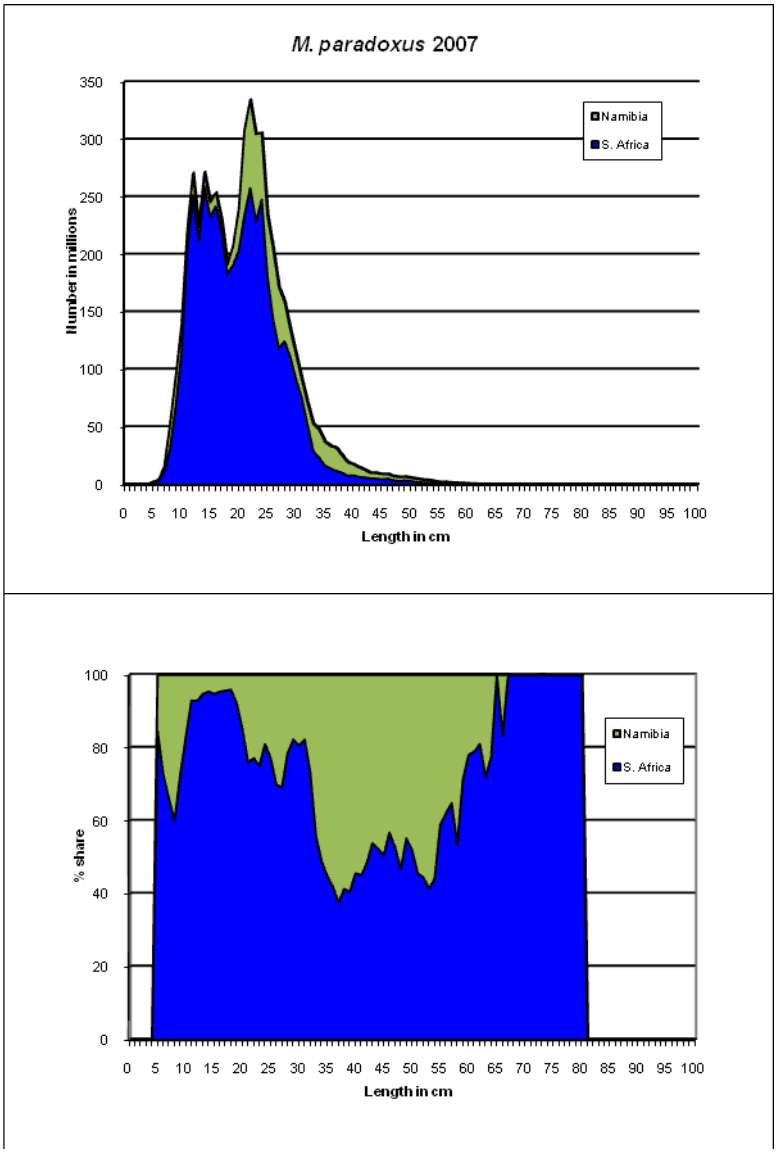


Figure 4.6 a) Estimated abundance in numbers of deep-water hake by 1 cm length classes. Namibia (green) added on top of South-Africa (blue).
b) % share between South-Africa (blue) and Namibia (green) of deep-water hake in numbers by 1 cm length classes in January-February 2007.

Table 4.2 Density estimates of *M. paradoxus* by depth strata and regions.

Region	0-99m	100-199m	200-299m	300-399m	400-499m	500-599	600-699
Cunene-21°S	n.a.	0	0.05	2.82	2.46	5.59	4.25
21°S-25°S	n.a.	0	0.41	6.38	3.67	4.43	5.52
25°S-Orange River	0	2.29	1.34	17.21	14.58	2.21	5.56
Orange River-S. Hondeklip Bay	n.a.	4.38	17.73	11.25	7.53	10.98	0.77
S. Hondeklip Bay-N. Saldanha Bay	n.a.	4.90	30.21	16.48	34.69	2.99	2.25
N. Saldanha Bay- Cape of Good Hope	n.a.	1.27	11.18	30.96	40.90	9.42	n.a.
Cape of Good Hope – Cape Agulhas	0	0.03	0.43	82.32	45.08	2.50	n.a.

Table 4.3 Density estimates of *M. capensis* by depth strata and regions.

Region	0-99m	100-199m	200-299m	300-399m	400-499m	500-599	600-699
Cunene-21°S	n.a.	4.67	17.17	5.68	0.57	0	0
21°S-25°S	n.a.	48.69	13.49	3.81	0	0	0
25°S-Orange River	33.43	6.61	20.09	2.88	0	0	0
Orange River-S. Hondeklip Bay	n.a.	2.82	1.52	0.65	0	0	0
S. Hondeklip Bay-N. Saldanha Bay	n.a.	5.85	1.41	0.65	0.06	0	0
N. Saldanha Bay-Cape of Good Hope	n.a.	5.69	4.93	0.44	0.03	0	n.a
Cape of Good Hope – Cape Agulhas	1.08	9.17	5.78	0.20	0	0	n.a.

5 Considerations of the survey results, *M. paradoxus*

The findings from the survey 10 January-5 Februar combined with similar findings from the Namibian survey in the period 11 January-15 February confirms some the general features as regards the distribution of *M. paradoxus*:

- Minimal spawning takes place at this time of the year, confirmed through few signs of maturing gonads. Some limited spawning activity could be traced through the ichthyoplankton sampling south of 31° S. The spawning seems to be originating south of Cape Town. The biological material has not yet been been genetically analysed and split into the two species not yet possible.
- The early pelagic stage is mainly confined to the outer part of the Childs Bank area, but there is an early southern spread following the continental shelf south to Cape of Good Hope.
- Juveniles between 15 and 24cm are mainly concentrated on the shelf between Hondeklip Bay and St. Helena Bay. In contrast to some earlier years there are no spillover of juvenile fish northwards over the Orange Banks into Namibia. The main interface between Namibia and South Africa seems to be along the slope.
- The massive migration towards the slope starts in the 25-29cm group and when the fish is bigger than 30cm this movement is mainly completed.
- The adult fish is found from Cunene in the north and southwards beyond Cape Agulhas. The biggest fish, bigger than 70cm is only recorded in South Africa.
- The main part of the stock is at the time of the survey located in South Africa which holds about 55% of the fishable biomass (fish bigger than 34cm) and 74% of the non-fishable biomass. Between 40 and 60cm fish length there is an increased share of the biomass in Namibian waters compared to smaller and bigger fish classes, perhaps indicating a periodic immigration from south.

Annex 1 Records of fishing stations

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1287
DATE :11/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°23.97
start stop duration Lon E 18°44.16
TIME :04:53:29 05:16:50 23.4 (min) Purpose : 3
LOG : 2229.78 2231.46 1.7 Region : 6100
FDEPTH: 86 82 Gear cond.: 0
BDEPTH: 86 82 Validity : 0
Towing dir: 0° Wire out : 300 m Speed : 4.3 kn
Sorted : 463 Total catch: 462.65 Catch/hour: 1188.82

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Jasus lalandii	876.75	5494	73.75	7
Jasus lalandii	243.60	1354	20.49	8
Merluccius capensis	35.97	177	3.03	1
Callorhinchus capensis	10.28	26	0.86	
Merluccius capensis	9.25	231	0.78	2
Chelidonichthys capensis	8.99	33	0.76	6
Merluccius capensis	2.00	247	0.17	3
Cynoglossus zanzibarensis	1.80	31	0.15	5
Lepidopus caudatus	0.16	28	0.01	
Loligo reynaudi	0.02	3	0.00	9
Paracallionymus costatus	0.01	3	0.00	
Trachurus capensis	0.01	8	0.00	4
Total	1188.83		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1288
DATE :11/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°31.37
start stop duration Lon E 18°27.93
TIME :07:43:46 08:06:10 22.4 (min) Purpose : 3
LOG : 2249.87 2251.14 1.3 Region : 6100
FDEPTH: 177 176 Gear cond.: 0
BDEPTH: 177 176 Validity : 0
Towing dir: 0° Wire out : 520 m Speed : 3.4 kn
Sorted :1042 Total catch: 1041.87 Catch/hour: 2790.72

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Etrumeus whiteheadi	2325.00	0	83.31	
Jasus lalandii	211.61	1066	7.58	19
Merluccius capensis	147.32	654	5.28	10
Lophius vomerinus	29.46	54	1.06	15
Chelidonichthys capensis	16.07	43	0.58	18
Todaropsis eblanae	15.54	271	0.56	22
Raja straeleni	12.02	5	0.43	
Todaropsis eblanae	11.52	193	0.41	21
Callorhinchus capensis	8.04	5	0.29	
Jasus lalandii	5.36	38	0.19	20
Mustelus palumbes	4.02	3	0.14	
Zeus capensis	2.68	46	0.10	17
Genypterus capensis	0.96	8	0.03	16
Helicolenus dactylopterus	0.67	11	0.02	13
Cynoglossus zanzibarensis	0.27	8	0.01	14
Merluccius paradoxus	0.16	3	0.01	12
Paracallionymus costatus	0.03	5	0.00	
Merluccius capensis	0.01	3	0.00	11
Total	2790.73		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1289
DATE :11/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°37.92
start stop duration Lon E 18°18.68
TIME :10:03:51 10:25:49 22.0 (min) Purpose : 3
LOG : 2263.45 2264.70 1.3 Region : 6100
FDEPTH: 407 406 Gear cond.: 0
BDEPTH: 407 406 Validity : 0
Towing dir: 0° Wire out : 1100 m Speed : 3.4 kn
Sorted :1309 Total catch: 1308.84 Catch/hour: 3574.44

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	2755.58	46255	77.09	24
Merluccius paradoxus	475.19	369	13.29	23
Helicolenus dactylopterus	106.51	833	2.98	25
Caelorinchus simorhynchus	84.66	939	2.37	
Bassanago albescens	54.62	76	1.53	
Lophius vomerinus	43.70	22	1.22	26
Todaropsis eblanae	19.12	150	0.53	28
Parapagurus pilosimanus	16.39	0	0.46	
Todaropsis eblanae	15.02	153	0.42	27
Malacocephalus laevis	1.37	5	0.04	
Maurolicus muelleri	1.37	0	0.04	
Paracallionymus costatus	0.46	57	0.01	
Rossia enigmatica	0.20	5	0.01	
Lucigadus ori	0.09	14	0.00	
Physiculus capensis	0.07	3	0.00	
Psychrolutes macrocephalus	0.03	5	0.00	
Sepia sp.	0.03	3	0.00	
Rochinia sp.	0.02	3	0.00	
Tripterophycis gilchristi	0.01	3	0.00	
Total	3574.43		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1290
DATE :11/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°38.27
start stop duration Lon E 18°15.42
TIME :12:43:28 13:04:39 21.2 (min) Purpose : 3
LOG : 2273.84 2274.93 1.1 Region : 6100
FDEPTH: 483 482 Gear cond.: 0
BDEPTH: 483 482 Validity : 0
Towing dir: 0° Wire out : 1400 m Speed : 3.1 kn
Sorted : 145 Total catch: 144.93 Catch/hour: 410.37

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	212.36	745	51.75	30
Bassanago albescens	70.79	96	17.25	
Lophius vomerinus	65.13	34	15.87	32
Merluccius paradoxus	33.98	17	8.28	29
Caelorinchus simorhynchus	8.21	156	2.00	
Helicolenus dactylopterus	5.38	102	1.31	31
Todaropsis eblanae	4.36	31	1.06	33
Caelorinchus braueri	4.13	442	1.01	
Paracallionymus costatus	0.99	184	0.24	
Shrimps, small, non comm.	0.77	136	0.19	
Myxine capensis	0.57	3	0.14	
Lampanyctodes hectoris	0.39	187	0.10	
Photichthys argenteus	0.29	8	0.07	
Tripterophycis gilchristi	0.24	11	0.06	
Lucigadus ori	0.11	8	0.03	
Physiculus capensis	0.10	3	0.03	
Psychrolutes macrocephalus	0.06	6	0.01	
Shrimps, small, non comm.	0.03	3	0.01	0
Rossia enigmatica	0.03	3	0.01	
Bassanago albescens	0.03	3	0.01	0
Sepia sp.	0.01	3	0.00	
Epigonus sp.	0.01	3	0.00	
Total	407.99		99.42	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1291
DATE :11/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 34°48.99
start stop duration Lon E 18°15.05
TIME :14:58:32 15:22:09 23.6 (min) Purpose : 3
LOG : 2284.90 2286.06 1.2 Region : 6100
FDEPTH: 575 577 Gear cond.: 0
BDEPTH: 575 577 Validity : 0
Towing dir: 0° Wire out : 1600 m Speed : 2.9 kn
Sorted : 121 Total catch: 120.89 Catch/hour: 307.09

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Caelorinchus braueri	152.41	3175	49.63	
Merluccius paradoxus	68.59	43	22.33	34
Bathyraja smithii	38.10	8	12.41	
Chaceon chuni	20.07	152	6.53	
Psychrolutes macrocephalus	8.64	84	2.81	
Lophius vomerinus	7.37	3	2.40	35
Nezumia sp.	4.52	3767	1.47	
Shrimps, small, non comm.	2.32	0	0.76	
Photichthys argenteus	1.35	25	0.44	
Notacanthus sexspinis	1.06	10	0.35	
Malacocephalus laevis	0.84	3	0.27	
Bathyraja smithii	0.53	20	0.17	0
Raja leopardus	0.45	18	0.15	
Bathypolypus valdiviae	0.32	5	0.10	
Trachyscorpia eschmeyeri	0.18	3	0.06	
Tripterophycis gilchristi	0.11	3	0.04	
Rossia enigmatica	0.09	3	0.03	
Lepidion capensis	0.04	5	0.01	
Champsodon capensis	0.03	3	0.01	
Chauliodus sloani	0.02	3	0.01	
Diaphus sp.	0.02	5	0.01	
Oreosoma atlanticum	0.01	3	0.00	
Argyropelecus aculeatus	0.01	3	0.00	
Total	307.07		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1292
DATE :11/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°50.03
start stop duration Lon E 18°18.67
TIME :17:07:39 17:29:46 22.1 (min) Purpose : 3
LOG : 2292.66 2293.88 1.2 Region : 6100
FDEPTH: 462 458 Gear cond.: 0
BDEPTH: 462 458 Validity : 0
Towing dir: 0° Wire out : 1300 m Speed : 3.3 kn
Sorted : 442 Total catch: 442.04 Catch/hour: 1199.02

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1079.57	1023	90.04	36
Bassanago albescens	54.25	68	4.52	
Helicolenus dactylopterus	28.48	103	2.38	37
Caelorinchus simorhynchus	21.70	301	1.81	
Lampanyctodes hectoris	9.49	3955	0.79	
Todaropsis eblanae	1.21	5	0.10	38
Bathypolypus valdiviae	0.85	19	0.07	
Tripterophycis gilchristi	0.78	35	0.06	
Lycoteuthis lorigera	0.66	14	0.05	
Psychrolutes macrocephalus	0.62	3	0.05	
Ophichthus bennettai	0.44	3	0.04	
Notacanthus sexspinis	0.19	3	0.02	
Paracallionymus costatus	0.16	30	0.01	
Rossia enigmatica	0.15	5	0.01	
Symbolophorus boops	0.14	11	0.01	
Rochinia sp.	0.09	27	0.01	
Nezumia sp.	0.07	8	0.01	
Gymnoscopelus bolini	0.05	3	0.00	
Stereomastis sp.	0.04	5	0.00	
Champsodon capensis	0.04	3	0.00	
Lucigadus ori	0.02	5	0.00	
Total	1198.99		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1293
DATE :12/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°32.99
start stop duration Lon E 18°58.42
TIME :05:12:24 05:32:31 20.1 (min) Purpose : 3
LOG : 2378.07 2379.20 1.1 Region : 6100
FDEPTH: 558 551 Gear cond.: 0
BDEPTH: 558 551 Validity : 0
Towing dir: 0° Wire out : 1450 m Speed : 3.4 kn
Sorted : 57 Total catch: 56.78 Catch/hour: 169.32

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	80.52	69	47.55	39
Caelorinchus braueri	32.80	1059	19.37	
Schedophilus ovalis	19.38	3	11.45	
Caelorinchus simorhynchus	10.14	101	5.99	
Helicolenus dactylopterus	5.07	12	2.99	40
Bassanago albescens	4.47	6	2.64	
Photichthys argenteus	3.97	57	2.34	
Ancistrocheirus lesueuri	2.79	3	1.65	
Psychrolutes macrocephalus	1.88	15	1.11	
Myxine capensis	1.28	15	0.76	
Chaceon sp.	1.01	3	0.60	
Plesionika martia	0.95	0	0.56	
Lucigadus ori	0.83	75	0.49	
Beryx splendens	0.81	3	0.48	
Bathypolypus valdiviae	0.72	18	0.43	
Lycoteuthis lorigera	0.58	18	0.34	
Hoplostethus mediterraneus	0.54	3	0.32	
Stereomastis sp.	0.30	42	0.18	
Notacanthus sexspinis	0.27	3	0.16	
Nezumia sp.	0.24	89	0.14	
Ornithoteuthis antillarum	0.17	3	0.10	
Diretmus argenteus	0.15	3	0.09	
Funchalia woodwardi	0.12	6	0.07	
Symbolophorus boops	0.06	18	0.04	
Stoloteuthis sp.	0.05	15	0.03	
Scopelosaurus herwigi	0.04	3	0.03	
Aristaeomorpha foliacea	0.03	3	0.02	
Paraliparis australis	0.02	21	0.01	
Lepidion capensis	0.02	3	0.01	
Diaphus sp.	0.02	6	0.01	
Diaphus effulgens	0.02	3	0.01	
Paracallionymus costatus	0.01	3	0.01	
Gymnoscopelus sp.	0.01	3	0.01	
Chlorophthalmus sp.	0.01	3	0.01	
Neoscopelus macrolepidotus	0.01	3	0.01	
Argyropelecus aculeatus	0.01	3	0.00	
Lampanyctodes hectoris	0.00	3	0.00	
Total	169.32		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1294
DATE :12/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°24.40
start stop duration Lon E 19°10.70
TIME :08:45:49 09:06:22 20.6 (min) Purpose : 3
LOG : 2397.54 2398.77 1.2 Region : 6100
FDEPTH: 221 227 Gear cond.: 0
BDEPTH: 221 227 Validity : 0
Towing dir: 0° Wire out : 640 m Speed : 3.6 kn
Sorted : 327 Total catch: 327.42 Catch/hour: 955.97

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Parapagurus dimorphus	376.64	0	39.40	
Merluccius capensis	183.94	499	19.24	41
Squalus megalops	78.83	193	8.25	
Helicolenus dactylopterus	46.72	455	4.89	45
Chelidonichthys capensis	46.72	140	4.89	49
Caelorinchus simorhynchus	29.20	292	3.05	
Lophius vomerinus	26.28	70	2.75	46
Callorhinchus capensis	26.28	15	2.75	
Mustelus palumbes	25.40	20	2.66	
Etrumeus whiteheadi	14.60	201	1.53	
Raja straeleni	14.60	6	1.53	
Todaropsis eblanae	13.72	426	1.44	52
Trachurus capensis	11.68	79	1.22	44
Lepidopus caudatus	11.68	9	1.22	
Paracallionymus costatus	8.76	2085	0.92	
Merluccius paradoxus	8.76	44	0.92	43
Chelidonichthys queketti	8.76	26	0.92	50
Holohalaelurus regani	7.30	20	0.76	
Scyliorhinus capensis	5.84	29	0.61	
Genypterus capensis	2.92	6	0.31	47
Zeus capensis	2.92	15	0.31	48
Loligo reynaudi	2.28	12	0.24	51
Palinurus gilchristi	0.88	3	0.09	53
Cynoglossus zanzibarensis	0.48	0	0.05	
Emmelichthys nitidus	0.26	9	0.03	
Merluccius paradoxus	0.19	32	0.02	42
Champsodon capensis	0.15	20	0.02	
Exodromidia sp.	0.13	12	0.01	
Rochinia sp.	0.06	18	0.01	
Total	955.96		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1295
DATE :12/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°19.64
start stop duration Lon E 19°17.70
TIME :11:13:20 11:34:48 21.5 (min) Purpose : 3
LOG : 2410.05 2411.14 1.1 Region : 6100
FDEPTH: 185 186 Gear cond.: 0
BDEPTH: 185 186 Validity : 0
Towing dir: 0° Wire out : 510 m Speed : 3.0 kn
Sorted : 323 Total catch: 322.75 Catch/hour: 901.96

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	363.30	6855	40.28	
Parapagurus dimorphus	103.40	0	11.46	
Trachurus capensis	86.63	402	9.60	58
Merluccius capensis	78.25	293	8.68	55
Lophius vomerinus	69.86	151	7.75	61
URCHINS	61.48	17	6.82	
Mustelus palumbes	30.74	25	3.41	
Chelidonichthys capensis	19.56	45	2.17	63
Squalus megalops	16.04	53	1.78	
Merluccius capensis	10.34	3	1.15	54
Raja wallacei	10.06	3	1.12	
Raja straeleni	8.19	25	0.91	
Todaropsis eblanae	7.82	151	0.87	66
Torpedo nobiliana	5.59	3	0.62	
Callorhinchus capensis	5.59	3	0.62	
Holohalaelurus regani	5.59	17	0.62	
Congiopodus spinifer	3.35	8	0.37	
Merluccius paradoxus	3.35	8	0.37	56
Paracallionymus costatus	3.19	707	0.35	
Helicolenus dactylopterus	2.10	20	0.23	59
Cynoglossus zanzibarensis	1.79	22	0.20	60
Sepia australis	1.54	117	0.17	
Zeus capensis	1.09	28	0.12	62
Loligo reynaudi	0.86	3	0.09	64
Sardinops ocellatus	0.84	11	0.09	
Lepidopus caudatus	0.43	6	0.05	
Merluccius capensis	0.26	45	0.03	57
Loligo reynaudi	0.24	3	0.03	65
Chelidonichthys queketti	0.18	3	0.02	
Champsodon capensis	0.16	20	0.02	
Exodromidia sp.	0.13	11	0.01	
Total	901.95		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1296
DATE :12/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°12.29
start stop duration Lon E 19°25.59
TIME :13:20:36 13:30:54 10.3 (min) Purpose : 3
LOG : 2422.73 2423.28 0.6 Region : 6100
FDEPTH: 170 170 Gear cond.: 0
BDEPTH: 170 170 Validity : 0
Towing dir: 0° Wire out : 510 m Speed : 3.2 kn
Sorted : 168 Total catch: 1380.96 Catch/hour: 8044.43

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Engraulis capensis	5434.95	0	67.56	
Etrumeus whiteheadi	2108.74	0	26.21	
Merluccius capensis	215.53	740	2.68	68
Loligo reynaudi	57.77	478	0.72	78
Loligo reynaudi	54.37	338	0.68	79
Chelidonichthys capensis	29.13	64	0.36	75
Todaropsis eblanae	27.86	746	0.35	77
Zeus capensis	21.75	542	0.27	74
Lophius vomerinus	17.48	29	0.22	72
Raja straeleni	17.48	12	0.22	
Squalus megalops	11.65	35	0.14	
Sepia australis	10.19	950	0.13	
Merluccius capensis	9.51	478	0.12	67
Lepidopus caudatus	8.16	12	0.10	
Holohalaelurus regani	5.83	12	0.07	
Cynoglossus zanzibarensis	2.91	35	0.04	71
Merluccius paradoxus	2.91	12	0.04	69
Paracallionymus costatus	2.72	478	0.03	
Helicolenus dactylopterus	1.51	47	0.02	70
Exodromidia sp.	1.50	70	0.02	
Palinurus gilchristi	0.87	6	0.01	76
Scyliorhinus capensis	0.87	6	0.01	
Genypterus capensis	0.76	6	0.01	73
Total	8044.44		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1297
DATE :12/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°3.37
start stop duration Lon E 19°37.10
TIME :16:41:26 17:10:12 28.8 (min) Purpose : 3
LOG : 2440.65 2442.26 1.6 Region : 6100
FDEPTH: 149 150 Gear cond.: 0
BDEPTH: 149 150 Validity : 0
Towing dir: 0° Wire out : 450 m Speed : 3.4 kn
Sorted : 303 Total catch: 303.00 Catch/hour: 631.91

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	281.54	4240	44.55	81
Merluccius capensis	156.41	551	24.75	82
Etrumeus whiteheadi	43.80	1412	6.93	
Callorhinchus capensis	22.94	25	3.63	
Chelidonichthys capensis	18.77	33	2.97	89
Raja straeleni	14.67	35	2.32	
Lophius vomerinus	13.56	44	2.15	86
Merluccius capensis	12.51	949	1.98	80
Squalus megalops	12.51	25	1.98	
Palinurus gilchristi	9.38	40	1.49	90
Mustelus palumbes	7.72	2	1.22	
Zeus capensis	7.72	273	1.22	88
URCHINS	7.61	0	1.20	
Cynoglossus zanzibarensis	4.17	113	0.66	85
Paracallionymus costatus	3.13	0	0.50	
Starfish	2.29	0	0.36	
Sepia australis	2.09	161	0.33	
Helicolenus dactylopterus	1.88	104	0.30	84
Palinurus gilchristi	1.75	15	0.28	91
Loligo reynaudi	1.29	6	0.20	92
Genypterus capensis	0.86	10	0.14	87
Congiopodus spinifer	0.83	2	0.13	
Parapagurus dimorphus	0.79	0	0.13	
Todaropsis eblanae	0.79	33	0.13	94
Raja pullopunctata	0.67	8	0.11	
Holohalaelurus regani	0.58	2	0.09	
Loligo reynaudi	0.50	6	0.08	93
Trachurus capensis	0.34	4	0.05	83
Chelidonichthys queketti	0.24	4	0.04	
Sardinops ocellatus	0.20	2	0.03	
Lepidopus caudatus	0.11	4	0.02	
Sepia hieronis	0.09	6	0.01	
TETRAODONTIDAE	0.04	2	0.01	
Mursia cristimanus	0.03	2	0.01	
Champsodon capensis	0.03	2	0.00	
Emmelichthys nitidus	0.03	2	0.00	
Sepia typica	0.03	10	0.00	
Macrorhamphosus scolopax	0.02	2	0.00	
Total	631.92		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1298
DATE :13/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 35°18.35
start stop duration Lon E 18°42.82
TIME :04:30:39 05:00:08 29.5 (min) Purpose : 3
LOG : 2518.07 2519.80 1.7 Region : 6100
FDEPTH: 558 553 Gear cond.: 0
BDEPTH: 558 553 Validity : 0
Towing dir: 0° Wire out : 1450 m Speed : 3.5 kn
Sorted : 128 Total catch: 128.23 Catch/hour: 261.07

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Caelorinchus braueri	118.09	3374	45.23	
Merluccius paradoxus	97.73	134	37.43	95
Genypterus capensis	24.43	2	9.36	97
Shrimps, small, non comm.	5.46	0	2.09	
Notacanthus sexspinis	5.44	104	2.08	
Caelorinchus simorhynchus	4.30	43	1.65	
Myxine capensis	1.34	24	0.51	
Helicolenus dactylopterus	0.69	14	0.27	96
Nezumia sp.	0.59	134	0.23	
Psychrolutes macrocephalus	0.59	12	0.23	
Stereomastis sp.	0.45	63	0.17	
Chaceon sp.	0.35	2	0.13	
Lucigadus ori	0.31	31	0.12	
Caelorinchus matamua	0.22	2	0.09	
Bathypolypus valdiviae	0.20	8	0.08	
Tripterophycis gilchristi	0.18	4	0.07	
Photichthys argenteus	0.15	6	0.06	
Parapagurus pilosimanus	0.14	0	0.05	
Diaphus sp.	0.10	26	0.04	
Diaphus effulgens	0.09	4	0.04	
Argentina sp.	0.07	6	0.03	
Symbolophorus boops	0.05	4	0.02	
Physiculus capensis	0.03	4	0.01	
Stoloteuthis sp.	0.02	4	0.01	
Hoplostethus mediterraneus	0.02	8	0.01	
Epigonus sp.	0.02	2	0.01	
Rochinia sp.	0.02	6	0.01	
Lampanyctodes hectoris	0.01	4	0.00	
Maurolicus muelleri	0.01	4	0.00	
Total	261.07		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1299
DATE :13/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°16.50
start stop duration Lon E 18°45.13
TIME :06:15:49 06:44:10 28.4 (min) Purpose : 3
LOG : 2525.14 2526.77 1.6 Region : 6100
FDEPTH: 372 369 Gear cond.: 0
BDEPTH: 372 369 Validity : 0
Towing dir: 0° Wire out : 1000 m Speed : 3.5 kn
Sorted :1208 Total catch: 1207.96 Catch/hour: 2556.53

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1767.20	6025	69.12	101
Merluccius paradoxus	526.98	533	20.61	100
Caelorinchus simorhynchus	86.77	0	3.39	
Lepidopus caudatus	71.96	85	2.81	
Helicolenus dactylopterus	51.85	1452	2.03	102
Malacocephalus laevis	11.14	178	0.44	
Todaropsis eblanae	8.78	44	0.34	105
Merluccius capensis	6.35	2	0.25	98
Paracallionymus costatus	6.03	0	0.24	
Cynoglossus zanzibarensis	5.93	138	0.23	103
Todaropsis eblanae	4.34	34	0.17	104
Zeus capensis	2.96	8	0.12	
Parapagurus pilosimanus	1.84	0	0.07	
Starfish	1.54	0	0.06	
Raja sp.	0.72	2	0.03	
Haploblepharus edwardsii	0.58	44	0.02	
Merluccius paradoxus	0.47	17	0.02	99
Rossia enigmatica	0.38	11	0.01	
Abraliopsis gilchristi	0.20	32	0.01	
Chlorophthalmus sp.	0.13	8	0.00	
Squilla sp.	0.11	13	0.00	
Maurolicus muelleri	0.07	0	0.00	
Exodromidia sp.	0.05	4	0.00	
Mursia cristimanus	0.04	4	0.00	
Rochinia sp.	0.03	11	0.00	
Tripterophycis gilchristi	0.03	4	0.00	
Sepia sp.	0.02	11	0.00	
Total	2556.52		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1300
DATE :13/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°10.08
start stop duration Lon E 18°52.79
TIME :08:09:54 08:39:09 29.3 (min) Purpose : 3
LOG : 2536.63 2538.34 1.7 Region : 6100
FDEPTH: 227 225 Gear cond.: 0
BDEPTH: 227 225 Validity : 0
Towing dir: 0° Wire out : 620 m Speed : 3.5 kn
Sorted : 675 Total catch: 675.39 Catch/hour: 1385.42

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Trachurus capensis	709.74	4283	51.23	109
Parapagurus dimorphus	198.97	0	14.36	
Merluccius capensis	135.38	359	9.77	107
Merluccius capensis	94.36	49	6.81	106
Chelidonichthys capensis	69.74	144	5.03	116
Lophius vomerinus	36.92	39	2.67	112
Helicolenus dactylopterus	21.74	158	1.57	110
Lepidopus caudatus	17.25	57	1.25	
Todaropsis eblanae	15.38	240	1.11	119
Etrumeus whiteheadi	14.36	232	1.04	
Squalus megalops	14.36	29	1.04	
Loligo reynaudi	10.87	45	0.78	118
Holohalaelurus regani	10.52	62	0.76	
Paracallionymus costatus	6.71	1032	0.48	
Thyrsites atun	5.13	2	0.37	113
Callorhinchus capensis	4.10	2	0.30	
URCHINS	3.57	0	0.26	
Zeus capensis	3.28	6	0.24	115
Congiopodus spinifer	2.46	4	0.18	
Chelidonichthys queketti	2.19	8	0.16	117
Cynoglossus zanzibarensis	1.91	21	0.14	111
Raja straeleni	1.58	4	0.11	
Octopus vulgaris	1.52	2	0.11	
Merluccius paradoxus	1.05	6	0.08	108
Scyliorhinus capensis	0.62	2	0.04	
Genypterus capensis	0.59	4	0.04	114
Caelorinchus simorhynchus	0.55	8	0.04	
Ophichthus bennettai	0.37	2	0.03	
Plagiogeneion rubignosus	0.08	4	0.01	
Emmelichthys nitidus	0.05	4	0.00	
Sepia hieronis	0.05	2	0.00	
Champsodon capensis	0.01	2	0.00	
Total	1385.42		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1301
DATE :13/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 35°0.39
start stop duration Lon E 19°5.21
TIME :10:30:47 11:01:17 30.5 (min) Purpose : 3
LOG : 2553.53 2555.15 1.6 Region : 6100
FDEPTH: 176 176 Gear cond.: 0
BDEPTH: 176 176 Validity : 0
Towing dir: 0° Wire out : 480 m Speed : 3.2 kn
Sorted : 314 Total catch: 413.28 Catch/hour: 813.01

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	271.48	1092	33.39	121
Chelidonichthys capensis	161.31	354	19.84	127
Parapagurus dimorphus	149.90	0	18.44	
Merluccius capensis	53.11	41	6.53	120
URCHINS	49.10	0	6.04	
Lophius vomerinus	39.34	79	4.84	124
Etrumeus whiteheadi	26.52	511	3.26	
Raja straeleni	12.79	20	1.57	
Squalus megalops	9.84	24	1.21	
Genypterus capensis	7.16	22	0.88	125
Helicolenus dactylopterus	6.25	102	0.77	123
Chelidonichthys queketti	3.93	24	0.48	128
Zeus capensis	3.93	90	0.48	126
Congiopodus spinifer	3.34	14	0.41	
Starfish	2.73	0	0.34	
Raja pullopunctata	2.56	2	0.31	
Holohalaelurus regani	2.10	8	0.26	
Trachurus capensis	1.97	10	0.24	
Todaropsis eblanae	1.61	35	0.20	129
Paracallionymus costatus	0.95	250	0.12	
Sepia australis	0.94	59	0.12	
Lepidopus caudatus	0.94	24	0.12	
Cynoglossus zanzibarensis	0.39	6	0.05	
Merluccius capensis	0.39	35	0.05	122
Emmelichthys nitidus	0.35	24	0.04	
Galeus polli	0.04	2	0.01	
Total	813.01		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1302
DATE :13/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°54.84
start stop duration Lon E 19°14.95
TIME :12:29:39 12:59:45 30.1 (min) Purpose : 3
LOG : 2566.50 2568.09 1.6 Region : 6100
FDEPTH: 153 152 Gear cond.: 0
BDEPTH: 153 152 Validity : 0
Towing dir: 0° Wire out : 450 m Speed : 3.2 kn
Sorted : 246 Total catch: 704.82 Catch/hour: 1404.96

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	1008.24	28806	71.76	
Merluccius capensis	172.03	518	12.24	130
Callorhinchus capensis	52.82	38	3.76	
Chelidonichthys capensis	41.86	114	2.98	139
Merluccius capensis	19.38	1232	1.38	132
Parapagurus dimorphus	16.80	1355	1.20	
Merluccius capensis	15.35	191	1.09	131
Raja straeleni	13.95	8	0.99	
Zeus capensis	11.20	427	0.80	138
Todaropsis eblanae	9.63	415	0.69	142
Lophius vomerinus	8.97	10	0.64	135
Loligo reynaudi	6.82	78	0.49	141
URCHINS	5.02	78	0.36	0
Paracallionymus costatus	4.82	929	0.34	
Starfish	3.69	0	0.26	
Loligo reynaudi	3.07	44	0.22	140
Cynoglossus zanzibarensis	3.03	68	0.22	134
Helicolenus dactylopterus	2.35	157	0.17	133
URCHINS	1.61	12	0.11	
Genypterus capensis	1.27	10	0.09	137
Squalus megalops	1.20	2	0.09	
Mursia cristimanus	0.46	12	0.03	
Exodromidia sp.	0.46	12	0.03	
Squilla acuelata calmani	0.30	44	0.02	
Rochinia sp.	0.26	44	0.02	
Sepia australis	0.24	2	0.02	
Thyrsites atun	0.12	2	0.01	136
Total	1404.95		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1303
DATE :13/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°45.03
start stop duration Lon E 19°23.76
TIME :14:50:57 15:21:08 30.2 (min) Purpose : 3
LOG : 2581.59 2583.14 1.6 Region : 6100
FDEPTH: 85 92 Gear cond.: 0
BDEPTH: 85 92 Validity : 0
Towing dir: 0° Wire out : 240 m Speed : 3.1 kn
Sorted : 137 Total catch: 246.09 Catch/hour: 489.08

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Engraulis capensis	223.58	19443	45.71	
Sardinops ocellatus	84.47	1457	17.27	
Callorhinchus capensis	65.58	85	13.41	
Chelidonichthys capensis	33.79	70	6.91	148
Merluccius capensis	29.81	161	6.10	143
URCHINS	18.28	72	3.74	
Raja straeleni	5.96	2	1.22	
Etrumeus whiteheadi	5.56	175	1.14	
Sepia papillata	3.58	6	0.73	
Merluccius capensis	3.18	219	0.65	144
Gonorhynchus gonorhynchus	3.04	46	0.62	
Zeus capensis	2.68	60	0.55	147
Lepidopus caudatus	2.14	610	0.44	
Pterogymnus laniarius	1.99	8	0.41	
Mursia cristimanus	1.29	89	0.26	
Cynoglossus zanzibarensis	1.23	10	0.25	146
Todaropsis eblanae	1.04	40	0.21	149
Loligo reynaudi	0.72	36	0.15	150
Trachurus capensis	0.70	20	0.14	145
Paracallionymus costatus	0.18	16	0.04	
Sepia australis	0.05	10	0.01	
Congiopodus spinifer	0.02	6	0.00	
Sepia typica	0.02	6	0.00	
Arnoglossus capensis	0.01	6	0.00	
Starfish	0.00	6	0.00	
Total	488.90		99.96	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1304
DATE :14/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°49.82
start stop duration Lon E 18°25.43
TIME :04:25:50 04:56:40 30.8 (min) Purpose : 3
LOG : 2665.44 2667.27 1.8 Region : 6100
FDEPTH: 350 354 Gear cond.: 0
BDEPTH: 350 354 Validity : 0
Towing dir: 0° Wire out : 1020 m Speed : 3.6 kn
Sorted : 232 Total catch: 2081.60 Catch/hour: 4049.81

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	2208.17	25895	54.53	153
Merluccius paradoxus	1258.75	7041	31.08	154
Caelorinchus simorhynchus	359.53	7490	8.88	
Lophius vomerinus	35.02	25	0.86	159
Raja straeleni	31.13	12	0.77	
Paracallionymus costatus	29.28	4183	0.72	
Zeus capensis	27.24	47	0.67	161
Trachurus capensis	16.17	68	0.40	156
Emmelichthys nitidus	12.32	25	0.30	
Helicolenus dactylopterus	11.67	204	0.29	157
Todaropsis eblanae	10.58	78	0.26	164
Merluccius capensis	7.78	4	0.19	151
Merluccius paradoxus	7.20	6	0.18	155
Halaelurus natalensis	6.81	10	0.17	
Thyrsites atun	6.52	2	0.16	160
Rochinia sp.	4.62	514	0.11	
Todaropsis eblanae	4.18	25	0.10	163
Scomber japonicus	3.60	2	0.09	162
Octopus magnificus	2.63	2	0.06	
Parapagurus dimorphus	2.06	78	0.05	
Cynoglossus zanzibarensis	1.03	51	0.03	158
Champsodon capensis	0.89	51	0.02	
Mursia cristimanus	0.76	51	0.02	
Lampanyctodes hectoris	0.54	232	0.01	
Callorhinchus capensis	0.45	2	0.01	
Maurolicus muelleri	0.41	307	0.01	
Ophichthus bennettai	0.27	2	0.01	
Chlorophthalmus sp.	0.18	25	0.00	
Merluccius paradoxus	0.03	25	0.00	152
Total	4049.81		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1305
DATE :14/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°52.80
start stop duration Lon E 18°34.62
TIME :06:17:28 06:48:13 30.8 (min) Purpose : 3
LOG : 2674.77 2676.43 1.7 Region : 6100
FDEPTH: 227 224 Gear cond.: 0
BDEPTH: 227 224 Validity : 0
Towing dir: 0° Wire out : 650 m Speed : 3.2 kn
Sorted : 310 Total catch: 1073.50 Catch/hour: 2094.63

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	1326.83	20732	63.34	
Parapagurus dimorphus	162.34	0	7.75	
Merluccius capensis	122.93	455	5.87	165
Todaropsis eblanae	85.07	1311	4.06	177
Lophius vomerinus	68.29	154	3.26	171
Merluccius capensis	60.49	21	2.89	166
Chelidonichthys capensis	56.59	88	2.70	174
Todaropsis eblanae	52.14	687	2.49	176
Helicolenus dactylopterus	37.07	414	1.77	169
Zeus capensis	35.90	172	1.71	173
Merluccius paradoxus	33.17	219	1.58	167
Paracallionymus costatus	15.61	1951	0.75	
Sepia australis	12.18	983	0.58	
Trachurus capensis	9.99	62	0.48	168
Genypterus capensis	4.88	20	0.23	172
Raja straeleni	4.68	6	0.22	
Holohalaelurus regani	1.76	6	0.08	
Sepia hieronis	1.56	16	0.07	
Cynoglossus zanzibarensis	1.33	78	0.06	170
Loligo reynaudi	0.95	4	0.05	175
Squalus megalops	0.59	2	0.03	
Champsodon capensis	0.30	47	0.01	
Total	2094.63		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1306
DATE :14/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°45.63
start stop duration Lon E 18°45.01
TIME :08:22:53 08:51:52 29.0 (min) Purpose : 3
LOG : 2688.77 2690.39 1.6 Region : 6100
FDEPTH: 176 176 Gear cond.: 0
BDEPTH: 176 176 Validity : 0
Towing dir: 0° Wire out : 540 m Speed : 3.4 kn
Sorted : 532 Total catch: 2085.61 Catch/hour: 4316.54

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	3453.26	42114	80.00	
Merluccius capensis	571.23	2556	13.23	178
Chelidonichthys capensis	113.83	325	2.64	186
Lophius vomerinus	55.88	108	1.29	183
Merluccius capensis	35.18	27	0.82	179
Zeus capensis	20.19	292	0.47	185
Callorhinchus capensis	14.49	8	0.34	
Helicolenus dactylopterus	11.18	170	0.26	181
Cynoglossus zanzibarensis	9.49	122	0.22	182
Todaropsis eblanae	9.24	317	0.21	188
Raja straeleni	4.55	17	0.11	
Raja pullopunctata	4.14	2	0.10	
Sardinops ocellatus	2.92	50	0.07	
Sepia australis	2.67	267	0.06	
Loligo reynaudi	1.99	25	0.05	187
Trachurus capensis	1.47	25	0.03	180
Engraulis capensis	1.21	72	0.03	
Congiopodus spinifer	0.97	25	0.02	
Genypterus capensis	0.93	6	0.02	184
Squalus megalops	0.85	2	0.02	
Paracallionymus costatus	0.73	292	0.02	
Holohalaelurus regani	0.14	2	0.00	
Total	4316.55		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1307
DATE :14/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°38.13
start stop duration Lon E 18°56.46
TIME :10:27:27 10:58:14 30.8 (min) Purpose : 3
LOG : 2703.22 2704.83 1.6 Region : 6100
FDEPTH: 143 140 Gear cond.: 0
BDEPTH: 143 140 Validity : 0
Towing dir: 0° Wire out : 420 m Speed : 3.1 kn
Sorted : 323 Total catch: 403.98 Catch/hour: 787.74

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	259.34	1301	32.92	190
Etrumeus whiteheadi	105.30	2771	13.37	
Chelidonichthys capensis	99.45	328	12.62	197
Callorhinchus capensis	74.10	90	9.41	
Merluccius capensis	70.20	31	8.91	189
Raja straeleni	43.93	58	5.58	
Lophius vomerinus	35.10	47	4.46	194
Merluccius capensis	19.89	1275	2.52	191
Zeus capensis	19.54	573	2.48	196
Paracallionymus costatus	13.57	2262	1.72	
Genypterus capensis	10.41	23	1.32	195
Todaropsis eblanae	10.18	456	1.29	199
Cynoglossus zanzibarensis	9.75	214	1.24	193
Sepia australis	4.80	480	0.61	
Loligo reynaudi	2.80	47	0.35	198
Sepia hieronis	1.29	47	0.16	
Helicolenus dactylopterus	1.07	18	0.14	192
Congiopodus spinifer	0.94	4	0.12	
Squilla acuelata calmani	0.70	12	0.09	
Rochinia sp.	0.23	35	0.03	
UNIDENTIFIED FISH	0.21	12	0.03	
Sepia typica	0.04	8	0.00	
Total	782.83		99.38	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1309
DATE :15/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 34°36.87
start stop duration Lon E 17°56.61
TIME :04:35:29 05:05:17 29.8 (min) Purpose : 3
LOG : 2807.49 2809.05 1.6 Region : 6100
FDEPTH: 579 577 Gear cond.: 0
BDEPTH: 579 577 Validity : 0
Towing dir: 0° Wire out : 1600 m Speed : 3.2 kn
Sorted : 421 Total catch: 421.19 Catch/hour: 848.03

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	444.97	330	52.47	200
Caelorinchus braueri	169.13	3191	19.94	
Helicolenus dactylopterus	100.67	616	11.87	202
Notacanthus sexspinis	56.38	894	6.65	
Merluccius paradoxus	36.24	131	4.27	201
Lophius vomerinus	7.05	4	0.83	203
Photichthys argenteus	6.48	0	0.76	
Malacocephalus laevis	5.03	12	0.59	
Shrimps, small, non comm.	4.39	0	0.52	
Caelorinchus simorhynchus	4.03	74	0.47	
Tripterophycis gilchristi	3.10	129	0.37	
Ancistrocheirus lesueuri	2.01	2	0.24	
Myxine capensis	1.41	16	0.17	
Hoplostethus mediterraneus	1.39	26	0.16	
Oreosoma atlanticum	1.31	6	0.15	
Ophichthus bennettai	0.97	12	0.11	
Deania sp.	0.89	2	0.10	
Etmopterus brachyurus	0.58	14	0.07	
Lepidion capensis	0.47	10	0.06	
Paracallionymus costatus	0.25	34	0.03	
Nezumia sp.	0.22	2	0.03	0
Coloconger cadenati	0.17	2	0.02	
Trachyscorpia eschmeyeri	0.15	2	0.02	
Chlorophthalmus agassizi	0.13	2	0.01	
Gymnoscopelus sp.	0.11	6	0.01	
Symbolophorus boops	0.11	6	0.01	
Starfish	0.10	0	0.01	
Cyttus traversi	0.09	2	0.01	
Nezumia sp.	0.07	2	0.01	
Nettastoma parviceps	0.06	2	0.01	
Stereomastis sp.	0.04	8	0.00	
Physiculus capensis	0.03	4	0.00	
PARALEPIDIDAE	0.02	2	0.00	
Total	848.03		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1310
DATE :15/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°34.29
start stop duration Lon E 17°57.30
TIME :06:29:08 06:39:07 10.0 (min) Purpose : 3
LOG : 2816.18 2816.69 0.5 Region : 6100
FDEPTH: 440 445 Gear cond.: 0
BDEPTH: 440 445 Validity : 0
Towing dir: 0° Wire out : 1200 m Speed : 3.0 kn
Sorted : 707 Total catch: 707.36 Catch/hour: 4256.93

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	2720.16	12169	63.90	204
Merluccius paradoxus	1101.30	975	25.87	205
Helicolenus dactylopterus	192.58	2413	4.52	207
Caelorinchus simorhynchus	138.42	4616	3.25	
Bassanago albescens	27.81	54	0.65	
Maurolicus muelleri	18.05	0	0.42	
ANTHOZOA (Sea anemones)	13.72	0	0.32	
Lycoteuthis lorigera	8.85	187	0.21	
Photichthys argenteus	8.00	162	0.19	
Lophius vomerinus	6.02	6	0.14	208
Malacocephalus laevis	4.69	6	0.11	
Parapagurus pilosimanus	3.37	0	0.08	
Starfish	3.07	0	0.07	
Lampanyctodes hectoris	3.01	0	0.07	
Paracallionymus costatus	2.23	241	0.05	
Rossia enigmatica	1.78	42	0.04	
Todaropsis eblanae	1.13	6	0.03	209
B I V A L V E S	0.66	0	0.02	
Physiculus capensis	0.48	24	0.01	
Shrimps, small, non comm.	0.48	0	0.01	
Lucigadus ori	0.40	48	0.01	
Diaphus effulgens	0.26	6	0.01	
Stereomastis sp.	0.24	6	0.01	
Symbolophorus boops	0.13	6	0.00	
Merluccius paradoxus	0.10	6	0.00	206
Total	4256.94		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1311
DATE :15/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°27.98
start stop duration Lon E 17°59.10
TIME :07:49:17 08:09:18 20.0 (min) Purpose : 3
LOG : 2823.91 2824.97 1.1 Region : 6100
FDEPTH: 325 333 Gear cond.: 0
BDEPTH: 325 333 Validity : 0
Towing dir: 0° Wire out : 890 m Speed : 3.2 kn
Sorted : 182 Total catch: 566.18 Catch/hour: 1696.84

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	791.21	4633	46.63	212
Helicolenus dactylopterus	419.58	6378	24.73	214
Caelorinchus simorhynchus	227.77	5296	13.42	
Lepidopus caudatus	56.94	273	3.36	
Merluccius capensis	41.96	48	2.47	210
Trachurus capensis	35.96	156	2.12	213
Octopus magnificus	28.47	99	1.68	
Lophius vomerinus	17.98	15	1.06	215
Todaropsis eblanae	14.03	144	0.83	218
Merluccius paradoxus	10.49	12	0.62	211
Starfish	9.59	0	0.57	
B I V A L V E S	8.03	0	0.47	
ANTHOZOA (Sea anemones)	7.52	0	0.44	
Genypterus capensis	5.99	9	0.35	216
Paracallionymus costatus	5.03	324	0.30	
Parapagurus pilosimanus	3.00	132	0.18	
Malacocephalus laevis	2.94	24	0.17	
Todaropsis eblanae	2.48	24	0.15	217
Physiculus capensis	1.80	12	0.11	
Holohalaelurus regani	1.65	3	0.10	
Rossia enigmatica	1.43	36	0.08	
Chlorophthalmus agassizi	1.08	24	0.06	
Mursia cristimanus	1.08	12	0.06	
Rochinia sp.	0.84	48	0.05	
Total	1696.85		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1312
DATE :15/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°22.54
start stop duration Lon E 18°2.39
TIME :09:31:25 09:54:02 22.6 (min) Purpose : 3
LOG : 2833.86 2835.15 1.3 Region : 6100
FDEPTH: 286 288 Gear cond.: 0
BDEPTH: 286 288 Validity : 0
Towing dir: 0° Wire out : 780 m Speed : 3.4 kn
Sorted : 212 Total catch: 212.48 Catch/hour: 563.61

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	275.86	1767	48.95	220
Caelorinchus simorhynchus	108.75	2133	19.30	
Helicolenus dactylopterus	75.60	660	13.41	224
Merluccius capensis	29.18	24	5.18	219
Trachurus capensis	13.26	56	2.35	223
Parapagurus pilosimanus	10.48	0	1.86	
Merluccius paradoxus	10.34	19	1.84	221
Lophius vomerinus	8.75	5	1.55	225
Raja pullopunctata	4.24	3	0.75	
Merluccius paradoxus	3.98	690	0.71	222
Maurolicus muelleri	3.98	0	0.71	
Todaropsis eblanae	3.18	34	0.56	228
Paracallionymus costatus	2.65	379	0.47	
Raja straeleni	2.65	3	0.47	
Holohalaelurus regani	2.31	8	0.41	
Scyliorhinus capensis	1.91	3	0.34	
Starfish	1.71	0	0.30	
Todaropsis eblanae	1.33	16	0.24	227
Zeus capensis	1.33	3	0.24	226
Malacocephalus laevis	0.98	13	0.17	
Rossia enigmatica	0.34	13	0.06	
Mursia cristimanus	0.30	0	0.05	
Lampanyctodes hectoris	0.27	0	0.05	
Emmelichthys nitidus	0.21	3	0.04	
Rochinia sp.	0.01	3	0.00	
Total	563.60		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1313
DATE :15/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°20.19
start stop duration Lon E 18°12.71
TIME :12:00:03 12:22:55 22.9 (min) Purpose : 3
LOG : 2851.97 2853.13 1.2 Region : 6100
FDEPTH: 289 290 Gear cond.: 0
BDEPTH: 289 290 Validity : 0
Towing dir: 0° Wire out : 840 m Speed : 3.0 kn
Sorted : 294 Total catch: 407.60 Catch/hour: 1069.35

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	466.99	1876	43.67	229
Caelorinchus simorhynchus	236.12	2361	22.08	
Parapagurus dimorphus	154.79	0	14.47	
URCHINS	39.93	0	3.73	
Merluccius paradoxus	36.73	197	3.43	231
Merluccius capensis	28.86	34	2.70	230
Mustelus palumbes	20.20	5	1.89	
Cruriraja parcomaculata	14.17	26	1.32	
Helicolenus dactylopterus	10.49	73	0.98	234
Lophius vomerinus	9.44	5	0.88	235
Holohalaelurus regani	9.18	24	0.86	
Starfish	7.98	0	0.75	
PORIFERA (Sponges)	6.51	0	0.61	
Etrumeus whiteheadi	5.51	8	0.52	
Todaropsis eblanae	3.70	60	0.35	237
Exodromidia sp.	3.10	207	0.29	
Raja wallacei	2.89	3	0.27	
Merluccius paradoxus	2.73	139	0.26	232
Trachurus capensis	2.18	5	0.20	233
Octopus vulgaris	2.13	3	0.20	
Mursia cristimanus	1.62	192	0.15	
Paracallionymus costatus	1.25	147	0.12	
Scyliorhinus capensis	1.05	3	0.10	
ANTHOZOA (Sea anemones)	0.89	0	0.08	
Genypterus capensis	0.68	3	0.06	236
Rochinia sp.	0.16	16	0.01	
Chlorophthalmus agassizi	0.08	0	0.01	
Total	1069.35		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1314
DATE :15/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°59.11
start stop duration Lon E 17°59.75
TIME :15:07:12 15:38:05 30.9 (min) Purpose : 3
LOG : 2876.09 2877.61 1.5 Region : 6100
FDEPTH: 193 191 Gear cond.: 0
BDEPTH: 193 191 Validity : 0
Towing dir: 0° Wire out : 580 m Speed : 3.0 kn
Sorted : 304 Total catch: 303.77 Catch/hour: 590.04

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	186.47	785	31.60	239
Parapagurus dimorphus	130.14	0	22.06	
Chelidonichthys capensis	110.72	278	18.76	248
Galeorhinus galeus	60.21	4	10.21	
Helicolenus dactylopterus	19.42	1103	3.29	242
Callorhinchus capensis	19.42	12	3.29	
Lophius vomerinus	13.60	45	2.30	244
Paracallionymus costatus	12.14	486	2.06	
Chelidonichthys queketti	8.74	51	1.48	249
Thyrsites atun	7.28	4	1.23	245
Merluccius capensis	5.83	4	0.99	238
Cynoglossus zanzibarensis	3.11	31	0.53	243
Todaropsis eblanae	3.01	72	0.51	250
Etrumeus whiteheadi	2.33	25	0.40	
Zeus capensis	1.94	29	0.33	247
Merluccius paradoxus	1.26	12	0.21	240
Cruriraja parcomaculata	1.26	2	0.21	
Merluccius paradoxus	1.11	146	0.19	241
Holohalaelurus regani	0.89	8	0.15	
Congiopodus spinifer	0.66	6	0.11	
Sepia hieronis	0.30	8	0.05	
Physiculus capensis	0.08	2	0.01	
Sepia australis	0.06	4	0.01	
Genypterus capensis	0.04	2	0.01	246
Total	590.03		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1315
DATE :16/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 33°51.98
start stop duration Lon E 17°25.68
TIME :04:43:56 05:13:22 29.4 (min) Purpose : 3
LOG : 2954.00 2955.52 1.5 Region : 6100
FDEPTH: 581 581 Gear cond.: 0
BDEPTH: 581 581 Validity : 0
Towing dir: 0° Wire out : 1650 m Speed : 3.1 kn
Sorted : 151 Total catch: 150.72 Catch/hour: 307.17

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Lampris guttatus	81.52	2	26.54	
Merluccius paradoxus	67.26	49	21.89	252
Malacocephalus laevis	61.14	1492	19.90	
Merluccius paradoxus	44.84	86	14.60	251
Notacanthus sexspinis	10.19	110	3.32	
Neolithodes asperrimus	7.74	4	2.52	
Brama brama	6.11	4	1.99	254
Helicolenus dactylopterus	5.83	41	1.90	253
Lepidion capensis	5.30	43	1.73	
Ancistrocheirus lesueuri	2.10	2	0.68	
Shrimps, small, non comm.	1.96	0	0.64	
Todarodes angolensis	1.93	2	0.63	255
Lycoteuthis lorigera	1.67	49	0.54	
Etmopterus brachyurus	1.65	8	0.54	
Chaceon sp.	1.49	12	0.48	
Todarodes angolensis	1.00	2	0.32	256
Tripterophycis gilchristi	0.98	4	0.32	
Nezumia sp.	0.82	77	0.27	
Myxine capensis	0.73	10	0.24	
ANTHOZOA (Sea anemones)	0.71	0	0.23	
Trachyscorpia eschmeyeri	0.65	4	0.21	
Photichthys argenteus	0.61	14	0.20	
Diaphus sp.	0.33	94	0.11	
Bassanago albescens	0.19	2	0.06	
Ophichthus bennettai	0.11	2	0.04	
Starfish	0.10	0	0.03	
Teuthowenia sp.	0.08	6	0.02	
Symbolophorus boops	0.03	2	0.01	
Raja leopardus	0.03	2	0.01	
Electrona risso	0.03	4	0.01	
Champsodon capensis	0.02	2	0.01	
Paraliparis australis	0.01	12	0.00	
Stoloteuthis sp.	0.01	2	0.00	
Total	307.17		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1316
DATE :16/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°53.15
start stop duration Lon E 17°28.04
TIME :06:29:18 07:00:34 31.3 (min) Purpose : 3
LOG : 2961.32 2963.05 1.7 Region : 6100
FDEPTH: 476 463 Gear cond.: 0
BDEPTH: 476 463 Validity : 0
Towing dir: 0° Wire out : 1350 m Speed : 3.3 kn
Sorted : 419 Total catch: 419.48 Catch/hour: 804.89

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	316.60	259	39.33	257
Merluccius paradoxus	220.66	508	27.41	258
Notacanthus sexspinis	78.67	1192	9.77	
Caelorinchus simorhynchus	42.21	844	5.24	
Bassanago albescens	36.65	54	4.55	
Malacocephalus laevis	36.46	1736	4.53	
Helicolenus dactylopterus	30.03	201	3.73	259
Genypterus capensis	16.31	6	2.03	261
Octopus magnificus	7.10	2	0.88	
ANTHOZOA (Sea anemones)	3.90	0	0.48	
Lycoteuthis lorigera	2.70	71	0.34	
Lophius vomerinus	2.69	4	0.33	260
Shrimps, small, non comm.	1.96	0	0.24	
Paracallionymus costatus	1.92	265	0.24	
Lucigadus ori	1.78	167	0.22	
Scyliorhinus capensis	1.34	2	0.17	
Tripterophycis gilchristi	1.29	61	0.16	
MYCTOPHIDAE	0.77	0	0.10	
B I V A L V E S	0.48	0	0.06	
Stereomastis sp.	0.35	63	0.04	
Beryx splendens	0.35	2	0.04	
Physiculus capensis	0.29	21	0.04	
CYPRAEIDAE (Bulia)	0.17	44	0.02	
Epigonus sp.	0.13	8	0.02	
Rossia enigmatica	0.07	2	0.01	
Stoloteuthis sp.	0.03	8	0.00	
Chaunax pictus	0.01	2	0.00	
Total	804.89		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1317
DATE :16/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°52.92
start stop duration Lon E 17°32.11
TIME :08:08:37 08:32:02 23.4 (min) Purpose : 3
LOG : 2968.13 2969.42 1.3 Region : 6100
FDEPTH: 331 331 Gear cond.: 0
BDEPTH: 331 331 Validity : 0
Towing dir: 0° Wire out : 920 m Speed : 3.3 kn
Sorted : 774 Total catch: 773.51 Catch/hour: 1981.67

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1777.97	8137	89.72	262
Caelorinchus simorhynchus	64.05	2065	3.23	
Helicolenus dactylopterus	37.15	492	1.87	264
Merluccius paradoxus	33.30	26	1.68	263
MYCTOPHIDAE	31.77	16153	1.60	
Octopus magnificus	9.30	8	0.47	
Parapagurus dimorphus	8.97	0	0.45	
Lophius vomerinus	7.69	10	0.39	265
Zeus capensis	6.92	15	0.35	266
Parapagurus pilosimanus	1.23	0	0.06	
Paracallionymus costatus	1.02	123	0.05	
Starfish	0.70	0	0.04	
Todaropsis eblanae	0.58	5	0.03	268
ANTHOZOA (Sea anemones)	0.28	0	0.01	
Malacocephalus laevis	0.23	3	0.01	
Rossia enigmatica	0.23	5	0.01	
Todaropsis eblanae	0.23	3	0.01	267
Rossia sp.	0.05	3	0.00	
Total	1981.65		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1318
DATE :16/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°48.22
start stop duration Lon E 17°37.97
TIME :09:45:02 10:15:43 30.7 (min) Purpose : 3
LOG : 2976.68 2978.39 1.7 Region : 6100
FDEPTH: 270 265 Gear cond.: 0
BDEPTH: 270 265 Validity : 0
Towing dir: 0° Wire out : 750 m Speed : 3.3 kn
Sorted : 428 Total catch: 489.25 Catch/hour: 957.12

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	696.45	7297	72.76	271
Parapagurus dimorphus	84.71	0	8.85	
Merluccius capensis	60.65	196	6.34	269
Caelorinchus simorhynchus	25.43	651	2.66	
Todaropsis eblanae	20.48	209	2.14	278
Zeus capensis	13.66	45	1.43	275
Brama brama	12.32	6	1.29	276
B I V A L V E S	6.10	0	0.64	0
Todaropsis eblanae	6.03	82	0.63	277
Cubiceps capensis	5.83	0	0.61	
URCHINS	5.28	92	0.55	
Paracallionymus costatus	4.01	446	0.42	
Lophius vomerinus	3.91	4	0.41	274
B I V A L V E S	2.46	0	0.26	
Merluccius paradoxus	2.35	2	0.25	270
Helicolenus dactylopterus	2.09	100	0.22	272
Starfish	1.37	0	0.14	
Lepidopus caudatus	1.26	6	0.13	
Todarodes angolensis	1.17	2	0.12	279
Holohalaelurus regani	0.59	2	0.06	
Cynoglossus zanzibarensis	0.48	10	0.05	273
Malacocephalus laevis	0.37	10	0.04	
Exodromidia sp.	0.12	10	0.01	
Total	957.13		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1319
DATE :16/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°42.21
start stop duration Lon E 17°47.49
TIME :12:02:41 12:33:08 30.5 (min) Purpose : 3
LOG : 2991.95 2993.50 1.6 Region : 6100
FDEPTH: 205 205 Gear cond.: 0
BDEPTH: 205 205 Validity : 0
Towing dir: 0° Wire out : 600 m Speed : 3.1 kn
Sorted : 205 Total catch: 204.62 Catch/hour: 403.19

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Parapagurus dimorphus	163.55	0	40.56	
Merluccius capensis	147.78	715	36.65	280
Lophius vomerinus	32.32	83	8.01	285
Chelidonichthys capensis	15.76	37	3.91	290
Merluccius paradoxus	10.84	286	2.69	281
Callorhinchus capensis	5.91	2	1.47	
Paracallionymus costatus	4.59	400	1.14	
Brama brama	4.53	4	1.12	287
Todaropsis eblanae	3.19	61	0.79	289
Raja straeleni	3.15	10	0.78	
Etrumeus whiteheadi	2.23	32	0.55	
Cynoglossus zanzibarensis	2.17	26	0.54	284
Congiopodus torvus	1.97	2	0.49	
Zeus capensis	1.97	28	0.49	286
Merluccius paradoxus	1.52	57	0.38	282
Todaropsis eblanae	0.49	8	0.12	288
Caelorinchus simorhynchus	0.43	14	0.11	
Helicolenus dactylopterus	0.30	12	0.07	283
Lepidopus caudatus	0.25	6	0.06	
Congiopodus spinifer	0.24	2	0.06	
Total	403.19		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1320
DATE :16/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°36.56
start stop duration Lon E 17°56.52
TIME :14:03:20 14:33:30 30.2 (min) Purpose : 3
LOG : 3004.53 3006.09 1.6 Region : 6100
FDEPTH: 162 161 Gear cond.: 0
BDEPTH: 162 161 Validity : 0
Towing dir: 0° Wire out : 480 m Speed : 3.1 kn
Sorted : 206 Total catch: 287.88 Catch/hour: 572.52

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	298.31	3240	52.11	291
Maurolicus muelleri	141.40	91225	24.70	
Merluccius paradoxus	32.77	3444	5.72	292
Squilla acuelata calmani	26.97	2838	4.71	
Todaropsis eblanae	15.77	426	2.75	301
Chelidonichthys capensis	12.73	36	2.22	299
Sepia australis	9.15	497	1.60	
Paracallionymus costatus	8.97	897	1.57	
Thyrsites atun	5.07	2	0.89	296
Starfish	2.88	0	0.50	
Callorhinchus capensis	2.59	2	0.45	
B I V A L V E S	2.46	0	0.43	
Cynoglossus zanzibarensis	2.35	32	0.41	294
Sepia hieronis	2.04	32	0.36	
Caelorinchus simorhynchus	1.34	91	0.23	
Octopus magnificus	1.21	2	0.21	
Raja straeleni	0.99	2	0.17	
Exodromidia sp.	0.98	60	0.17	
Goneplax angulata	0.78	6	0.14	
Zeus capensis	0.54	14	0.09	298
Loligo reynaudi	0.53	6	0.09	300
Parapagurus dimorphus	0.52	223	0.09	
Etrumeus whiteheadi	0.48	14	0.08	
Genypterus capensis	0.47	4	0.08	297
Jasus lalandii	0.30	2	0.05	302
Lophius vomerinus	0.28	4	0.05	295
Trachurus capensis	0.24	2	0.04	293
Lolligoncula mercatoris	0.14	52	0.03	
Mursia cristimanus	0.11	6	0.02	
Lepidopus caudatus	0.09	14	0.02	
Congiopodus spinifer	0.02	6	0.00	
Total	572.51		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1321
DATE :17/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°4.04
start stop duration Lon E 17°33.45
TIME :13:00:22 13:30:46 30.4 (min) Purpose : 3
LOG : 3160.63 3162.17 1.5 Region : 6100
FDEPTH: 333 327 Gear cond.: 0
BDEPTH: 333 327 Validity : 0
Towing dir: 0° Wire out : 1000 m Speed : 3.0 kn
Sorted : 579 Total catch: 616.64 Catch/hour: 1217.45

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	645.61	7325	53.03	303
Genypterus capensis	181.64	59	14.92	308
Merluccius paradoxus	157.95	223	12.97	304
Caelorinchus simorhynchus	133.86	1135	11.00	
Rochinia sp.	32.38	1704	2.66	
Lophius vomerinus	29.62	14	2.43	307
Mursia cristimanus	14.31	1591	1.18	
B I V A L V E S	4.05	0	0.33	
Trachurus capensis	3.30	10	0.27	305
PORIFERA (Sponges)	3.18	0	0.26	
Starfish	2.80	0	0.23	
Todaropsis eblanae	1.66	18	0.14	311
Zeus capensis	1.23	4	0.10	309
Todaropsis eblanae	1.01	12	0.08	310
Helicolenus dactylopterus	0.89	12	0.07	306
Sepia hieronis	0.81	38	0.07	
Parapagurus pilosimanus	0.78	65	0.06	
Parapagurus dimorphus	0.75	128	0.06	
Paracallionymus costatus	0.49	71	0.04	
Cubiceps capensis	0.47	4	0.04	
Myxine capensis	0.28	4	0.02	
Malacocephalus laevis	0.24	4	0.02	
Rossia enigmatica	0.16	4	0.01	
Total	1217.45		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1322
DATE :17/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°54.78
start stop duration Lon E 17°42.93
TIME :15:18:07 15:48:17 30.2 (min) Purpose : 3
LOG : 3174.87 3176.40 1.5 Region : 6100
FDEPTH: 155 161 Gear cond.: 0
BDEPTH: 155 161 Validity : 0
Towing dir: 0° Wire out : 450 m Speed : 3.1 kn
Sorted : 262 Total catch: 321.98 Catch/hour: 640.76

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Squilla acuelata calmani	276.62	16764	43.17	
Merluccius capensis	183.08	1057	28.57	312
Raja alba	99.50	2	15.53	
Chelidonichthys capensis	35.82	86	5.59	321
Callorhinchus capensis	13.93	10	2.17	
Zeus capensis	4.98	40	0.78	320
B I V A L V E S	4.20	0	0.66	
Todaropsis eblanae	3.88	107	0.61	322
Lophius vomerinus	3.18	4	0.50	318
Helicolenus dactylopterus	1.99	80	0.31	316
Exodromidia sp.	1.60	119	0.25	
Starfish	1.59	0	0.25	
Rochinia sp.	1.53	137	0.24	
Raja straeleni	1.39	6	0.22	
Genypterus capensis	1.01	12	0.16	319
Sepia hieronis	1.01	16	0.16	
Trachurus capensis	1.00	4	0.16	315
Merluccius paradoxus	0.98	84	0.15	313
Paracallionymus costatus	0.87	100	0.14	
Merluccius paradoxus	0.60	6	0.09	314
Etrumeus whiteheadi	0.43	6	0.07	
Sepia australis	0.40	14	0.06	
Lepidopus caudatus	0.30	6	0.05	
Mursia cristimanus	0.26	44	0.04	
Parapagurus dimorphus	0.23	10	0.04	
Lolligoncula mercatoris	0.20	40	0.03	
Cynoglossus zanzibarensis	0.16	2	0.02	317
Total	640.75		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1323
DATE :17/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°52.65
start stop duration Lon E 17°20.74
TIME :18:07:13 18:18:13 11.0 (min) Purpose : 3
LOG : 3197.78 3198.38 0.6 Region : 6100
FDEPTH: 309 309 Gear cond.: 0
BDEPTH: 309 309 Validity : 0
Towing dir: 0° Wire out : 820 m Speed : 3.3 kn
Sorted : 185 Total catch: 185.19 Catch/hour: 1011.97

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	775.96	4858	76.68	323
Caelorinchus simorhynchus	87.43	1902	8.64	
Lophius vomerinus	60.11	33	5.94	325
Helicolenus dactylopterus	32.88	464	3.25	324
Paracallionymus costatus	16.39	2186	1.62	
Callorhinchus capensis	12.02	11	1.19	
Holohalaelurus regani	10.99	27	1.09	
Malacocephalus laevis	6.28	11	0.62	
Todaropsis eblanae	4.92	104	0.49	328
Genypterus capensis	2.30	5	0.23	326
Rossia enigmatica	2.30	55	0.23	
Zeus capensis	0.38	5	0.04	327
Total	1011.96		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1324
DATE :18/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°31.31
start stop duration Lon E 17°27.81
TIME :04:37:58 05:04:18 26.3 (min) Purpose : 3
LOG : 3275.49 3276.87 1.4 Region : 6100
FDEPTH: 487 490 Gear cond.: 0
BDEPTH: 487 490 Validity : 0
Towing dir: 0° Wire out : 1300 m Speed : 3.1 kn
Sorted : 189 Total catch: 189.17 Catch/hour: 430.91

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	314.35	312	72.95	329
Genypterus capensis	47.84	7	11.10	331
Bassanago albescens	26.77	48	6.21	
Caelorinchus simorhynchus	15.49	321	3.59	
Helicolenus dactylopterus	10.25	62	2.38	330
Notacanthus sexspinis	7.86	64	1.82	
Todarodes angolensis	2.35	2	0.54	332
Cruriraja parcomaculata	2.19	5	0.51	
Todarodes angolensis	1.57	2	0.36	333
Starfish	0.81	0	0.19	
Caelorinchus braueri	0.64	75	0.15	
Rossia enigmatica	0.15	5	0.04	
Psychrolutes macrocephalus	0.15	2	0.03	
Pentaceros capensis	0.12	2	0.03	
Tripterophycis gilchristi	0.10	5	0.02	
Paracallionymus costatus	0.07	9	0.02	
Lucigadus ori	0.06	5	0.01	
Stereomastis sp.	0.04	5	0.01	
Symbolophorus boops	0.04	2	0.01	
Epigonus sp.	0.02	2	0.00	
Electrona risso	0.02	2	0.00	
B I V A L V E S	0.02	5	0.00	
Rochinia sp.	0.01	2	0.00	
Lampanyctodes hectoris	0.00	2	0.00	
Lycoteuthis lorigera	0.00	48	0.00	
Total	430.91		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1325
DATE :18/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°25.65
start stop duration Lon E 17°32.09
TIME :06:34:44 07:04:31 29.8 (min) Purpose : 3
LOG : 3284.60 3286.14 1.5 Region : 6100
FDEPTH: 413 413 Gear cond.: 0
BDEPTH: 413 413 Validity : 0
Towing dir: 0° Wire out : 1120 m Speed : 3.1 kn
Sorted : 215 Total catch: 215.20 Catch/hour: 433.73

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	280.15	794	64.59	336
Merluccius paradoxus	116.90	123	26.95	335
Brama brama	16.12	12	3.72	339
Caelorinchus simorhynchus	6.05	0	1.39	
Merluccius capensis	4.03	2	0.93	334
Lophius vomerinus	2.02	2	0.46	338
Helicolenus dactylopterus	2.02	18	0.46	337
Bassanago albescens	1.87	2	0.43	
Lycoteuthis lorigera	1.63	36	0.38	
Malacocephalus laevis	1.51	2	0.35	
MYCTOPHIDAE	0.35	0	0.08	
Paracallionymus costatus	0.32	38	0.07	
CYPRAEIDAE (Bulia)	0.28	54	0.06	
Todaropsis eblanae	0.21	2	0.05	340
B I V A L V E S	0.08	2	0.02	0
Stereomastis sp.	0.07	8	0.02	
Mursia cristimanus	0.03	6	0.01	
Champsodon capensis	0.02	2	0.01	
Maurolicus muelleri	0.02	2	0.00	
B I V A L V E S	0.02	6	0.00	
Sepia sp.	0.02	4	0.00	
Oreosoma atlanticum	0.01	2	0.00	
Total	433.73		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1326
DATE :18/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°18.80
start stop duration Lon E 17°43.47
TIME :08:38:40 09:09:25 30.7 (min) Purpose : 3
LOG : 3298.19 3299.86 1.7 Region : 6100
FDEPTH: 188 189 Gear cond.: 0
BDEPTH: 188 189 Validity : 0
Towing dir: 0° Wire out : 540 m Speed : 3.3 kn
Sorted : 127 Total catch: 126.98 Catch/hour: 247.85

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Lampanyctodes hectoris	89.79	0	36.23	
Merluccius paradoxus	66.36	2672	26.78	342
Merluccius capensis	33.18	174	13.39	341
Merluccius paradoxus	21.47	115	8.66	343
Squilla acuelata calmani	8.78	837	3.54	
Paracallionymus costatus	7.81	919	3.15	
Todaropsis eblanae	2.93	64	1.18	350
Caelorinchus simorhynchus	2.28	174	0.92	
Maurolicus muelleri	2.15	0	0.87	
Genypterus capensis	1.95	23	0.79	347
Todaropsis eblanae	1.83	43	0.74	349
Starfish	1.60	0	0.65	
Etrumeus whiteheadi	1.56	29	0.63	
Lophius vomerinus	1.37	12	0.55	346
Sepia australis	0.98	57	0.39	
Lepidopus caudatus	0.78	31	0.32	
B I V A L V E S	0.61	0	0.24	
Helicolenus dactylopterus	0.57	31	0.23	344
Zeus capensis	0.45	4	0.18	348
Todaropsis eblanae	0.41	27	0.17	351
Cynoglossus zanzibarensis	0.31	8	0.13	345
Exodromidia sp.	0.24	14	0.10	
Sepia hieronis	0.21	6	0.09	
CYPRAEIDAE (Bulia)	0.14	2	0.06	0
Parapagurus dimorphus	0.09	12	0.04	
Solenocera africana	0.01	8	0.00	
Total	247.85		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1327
DATE :18/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 33°10.56
start stop duration Lon E 17°18.01
TIME :12:45:40 13:15:50 30.2 (min) Purpose : 3
LOG : 3329.18 3330.70 1.5 Region : 6100
FDEPTH: 391 400 Gear cond.: 0
BDEPTH: 391 400 Validity : 0
Towing dir: 0° Wire out : 1080 m Speed : 3.0 kn
Sorted : 367 Total catch: 366.87 Catch/hour: 729.61

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	363.94	1151	49.88	352
Merluccius paradoxus	218.76	358	29.98	353
Helicolenus dactylopterus	49.72	418	6.81	354
Lophius vomerinus	25.85	16	3.54	355
Caelorinchus simorhynchus	18.30	183	2.51	
Brama brama	16.90	10	2.32	357
Octopus magnificus	15.91	2	2.18	
Lepidopus caudatus	9.94	12	1.36	
Genypterus capensis	2.78	2	0.38	356
Callorhinchus capensis	1.99	2	0.27	
Malacocephalus laevis	1.83	2	0.25	
Bassanago albescens	1.15	4	0.16	
Paracallionymus costatus	0.97	129	0.13	
Rossia enigmatica	0.48	14	0.07	
Myxine capensis	0.32	4	0.04	
Todaropsis eblanae	0.30	4	0.04	358
Todaropsis eblanae	0.26	2	0.04	359
Physiculus capensis	0.08	6	0.01	
Lucigadus ori	0.07	6	0.01	
Champsodon capensis	0.03	2	0.00	
Chlorophthalmus sp.	0.01	2	0.00	
Sepia sp.	0.01	2	0.00	
Total	729.61		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1328
DATE :19/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°16.63
start stop duration Lon E 17°43.82
TIME :04:07:09 04:32:12 25.1 (min) Purpose : 3
LOG : 3428.90 3430.18 1.3 Region : 6100
FDEPTH: 384 386 Gear cond.: 0
BDEPTH: 384 386 Validity : 0
Towing dir: 0° Wire out : 1120 m Speed : 3.1 kn
Sorted : 248 Total catch: 248.45 Catch/hour: 595.09

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	285.03	644	47.90	361
Helicolenus dactylopterus	114.97	1897	19.32	362
Merluccius paradoxus	95.81	77	16.10	360
Caelorinchus simorhynchus	45.51	949	7.65	
Parapagurus pilosimanus	19.16	872	3.22	
Octopus magnificus	13.77	10	2.31	
ANTHOZOA (Sea anemones)	7.71	0	1.30	
Lophius vomerinus	3.59	2	0.60	363
B I V A L V E S	2.44	0	0.41	
Funchalia woodwardi	1.44	105	0.24	
Starfish	1.38	0	0.23	
Paracallionymus costatus	1.27	170	0.21	
Genypterus capensis	1.20	2	0.20	364
Lycoteuthis lorigera	0.58	12	0.10	
Tripterophycis gilchristi	0.48	60	0.08	
Diaphus sp.	0.23	0	0.04	
Physiculus capensis	0.17	7	0.03	
Gymnoscopelus sp.	0.10	5	0.02	
CYPRAEIDAE (Bulia)	0.06	0	0.01	0
Lucigadus ori	0.06	10	0.01	
Plagiogeneion rubignosus	0.05	2	0.01	
Sepia sp.	0.04	7	0.01	
ARGENTINIDAE	0.03	2	0.01	
Epigonus sp.	0.02	2	0.00	
Total	595.09		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1329
DATE :19/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 34°6.67
start stop duration Lon E 17°50.37
TIME :06:14:41 06:44:14 29.6 (min) Purpose : 3
LOG : 3444.18 3445.81 1.6 Region : 6100
FDEPTH: 273 269 Gear cond.: 0
BDEPTH: 273 269 Validity : 0
Towing dir: 0° Wire out : 730 m Speed : 3.3 kn
Sorted : 494 Total catch: 585.70 Catch/hour: 1189.24

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	822.34	6432	69.15	367
Parapagurus dimorphus	200.61	0	16.87	
Caelorinchus simorhynchus	43.86	1253	3.69	
Lophius vomerinus	41.62	45	3.50	370
Merluccius capensis	16.24	8	1.37	365
Helicolenus dactylopterus	12.20	223	1.03	369
Merluccius capensis	12.18	24	1.02	366
Trachurus capensis	8.12	22	0.68	368
Paracallionymus costatus	7.47	997	0.63	
Raja straeleni	5.08	4	0.43	
Todaropsis eblanae	4.71	63	0.40	373
B I V A L V E S	2.91	69	0.24	
Octopus magnificus	2.44	4	0.20	
Holohalaelurus regani	1.62	6	0.14	
Starfish	1.52	6	0.13	
Malacocephalus laevis	1.52	24	0.13	
Todaropsis eblanae	1.10	12	0.09	372
Genypterus capensis	1.02	4	0.09	371
Lepidopus caudatus	0.81	2	0.07	
CYPRAEIDAE (Bulia)	0.62	0	0.05	0
Rossia enigmatica	0.49	12	0.04	
Exodromidia sp.	0.37	6	0.03	
URCHINS	0.26	0	0.02	
G A S T R O P O D S	0.08	0	0.01	
Physiculus capensis	0.05	6	0.00	
Total	1189.24		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1330
DATE :24/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°43.94
start stop duration Lon E 17°10.85
TIME :06:51:04 07:15:30 24.4 (min) Purpose : 3
LOG : 3598.33 3599.74 1.4 Region : 6100
FDEPTH: 306 305 Gear cond.: 0
BDEPTH: 306 305 Validity : 0
Towing dir: 0° Wire out : 840 m Speed : 3.5 kn
Sorted : 449 Total catch: 449.26 Catch/hour: 1102.93

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Brama brama	576.92	383	52.31	379
Merluccius paradoxus	427.17	2845	38.73	374
Lampanyctodes hectoris	36.82	0	3.34	
Caelorinchus simorhynchus	29.46	462	2.67	
Malacocephalus laevis	9.82	101	0.89	
Zeus capensis	7.36	12	0.67	378
Trachurus capensis	4.91	22	0.45	376
Parapagurus dimorphus	3.68	0	0.33	
Rochinia sp.	1.39	69	0.13	
Maurolicus muelleri	1.23	0	0.11	
Starfish	0.59	0	0.05	
Lepidopus caudatus	0.59	10	0.05	
Holohalaelurus regani	0.59	7	0.05	
Helicolenus dactylopterus	0.56	7	0.05	377
Paracallionymus costatus	0.49	47	0.04	
Todaropsis eblanae	0.39	10	0.04	381
Mursia cristimanus	0.32	66	0.03	
Notopogon macrosolen	0.25	2	0.02	
Sepia hieronis	0.15	2	0.01	
G A S T R O P O D S	0.09	0	0.01	
Todaropsis eblanae	0.07	2	0.01	380
PORIFERA (Sponges)	0.06	0	0.01	
Merluccius paradoxus	0.01	2	0.00	375
Total	1102.95		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1331
DATE :24/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°48.48
start stop duration Lon E 16°58.74
TIME :09:36:47 10:08:19 31.5 (min) Purpose : 3
LOG : 3614.26 3616.03 1.8 Region : 6100
FDEPTH: 356 355 Gear cond.: 0
BDEPTH: 356 355 Validity : 0
Towing dir: 0° Wire out : 917 m Speed : 3.4 kn
Sorted : 287 Total catch: 286.67 Catch/hour: 545.34

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	399.49	2125	73.26	384
Zeus capensis	81.80	146	15.00	387
Merluccius paradoxus	9.51	10	1.74	383
Helicolenus dactylopterus	9.51	51	1.74	385
Lepidopus caudatus	7.69	10	1.41	
Malacocephalus laevis	7.61	10	1.40	
Merluccius capensis	7.61	4	1.40	382
Maurolicus muelleri	7.61	0	1.40	
Caelorinchus simorhynchus	6.66	89	1.22	
PORIFERA (Sponges)	3.23	0	0.59	
Lophius vomerinus	2.47	2	0.45	386
Rochinia sp.	0.67	40	0.12	
Emmelichthys nitidus	0.48	2	0.09	
Cyttus traversi	0.41	2	0.08	
Todaropsis eblanae	0.27	4	0.05	388
Paracallionymus costatus	0.15	8	0.03	
Holohalaelurus regani	0.06	4	0.01	
Starfish	0.05	0	0.01	
Symbolophorus boops	0.03	2	0.01	
Mursia cristimanus	0.02	6	0.00	
Total	545.34		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1332
DATE :24/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°48.76
start stop duration Lon E 16°48.39
TIME :12:53:22 13:21:49 28.4 (min) Purpose : 3
LOG : 3635.90 3637.37 1.5 Region : 6100
FDEPTH: 446 445 Gear cond.: 0
BDEPTH: 446 445 Validity : 0
Towing dir: 0° Wire out : 1100 m Speed : 3.1 kn
Sorted :1541 Total catch: 1540.60 Catch/hour: 3250.21

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	2478.90	6679	76.27	389
Merluccius paradoxus	295.36	312	9.09	390
Notacanthus sexspinis	244.73	2167	7.53	
Bassanago albescens	71.73	110	2.21	
Helicolenus dactylopterus	42.19	224	1.30	391
Caelorinchus simorhynchus	33.76	489	1.04	
Parapagurus dimorphus	29.54	0	0.91	
Brama brama	21.10	13	0.65	394
Genypterus capensis	9.49	2	0.29	393
Lophius vomerinus	9.28	6	0.29	392
Malacocephalus laevis	3.80	11	0.12	
Todarodes angolensis	2.64	2	0.08	395
Holohalaelurus regani	1.69	4	0.05	
ANTHOZOA (Sea anemones)	1.61	25	0.05	
Starfish	1.56	0	0.05	
Symbolophorus boops	1.29	57	0.04	
Paracallionymus costatus	0.70	65	0.02	
Stereomastis sp.	0.23	27	0.01	
Rossia enigmatica	0.16	4	0.00	
Lucigadus ori	0.15	21	0.00	
URCHINS	0.11	11	0.00	
Photichthys argenteus	0.09	2	0.00	
Physiculus capensis	0.05	2	0.00	
Funchalia woodwardi	0.03	2	0.00	
Sepia sp.	0.02	4	0.00	
Nezumia sp.	0.02	4	0.00	
Lycoteuthis lorigera	0.01	2	0.00	
Total	3250.21		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1334
DATE :24/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 32°50.98
start stop duration Lon E 16°42.79
TIME :18:01:35 18:21:16 19.7 (min) Purpose : 3
LOG : 3658.16 3659.37 1.2 Region : 6100
FDEPTH: 616 624 Gear cond.: 0
BDEPTH: 616 624 Validity : 0
Towing dir: 0° Wire out : 1700 m Speed : 3.7 kn
Sorted : 26 Total catch: 25.96 Catch/hour: 79.11

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Caelorinchus braueri	33.52	494	42.37	
Notacanthus sexspinis	21.33	131	26.96	
Merluccius paradoxus	6.09	6	7.70	398
Nezumia sp.	5.58	110	7.05	
Photichthys argenteus	3.05	70	3.85	
Todarodes filippove	2.47	6	3.12	400
Caelorinchus matamua	1.27	6	1.60	
Shrimps, small, non comm.	0.94	0	1.19	
Funchalia woodwardi	0.75	49	0.95	
Helicolenus dactylopterus	0.73	3	0.92	399
Trachyscorpia eschmeyeri	0.62	3	0.79	
Starfish	0.50	0	0.63	
Diaphus sp.	0.44	128	0.56	
Selachophidium guentheri	0.44	3	0.56	
Hoplostethus mediterraneus	0.43	3	0.55	
NOTOSUDIDAE	0.24	0	0.31	
Symbolophorus boops	0.16	9	0.20	
Diaphus effulgens	0.15	3	0.19	
Gymnoscopelus sp.	0.07	3	0.08	
Hydrolagus africanus	0.06	3	0.08	
Leptocephalus	0.05	3	0.07	
Neoscopelus macrolepidotus	0.05	3	0.07	
Abraliopsis gilchristi	0.05	9	0.06	
Diaphus sp.	0.04	3	0.05	0
Electrona risso	0.03	6	0.03	
Stoloteuthis sp.	0.02	6	0.03	
Chauliodus sloani	0.02	6	0.02	
Gonostoma elongatum	0.02	3	0.02	
Total	79.12		100.02	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1335
DATE :25/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°16.33
start stop duration Lon E 17°27.09
TIME :04:29:03 04:59:57 30.9 (min) Purpose : 3
LOG : 3732.39 3733.98 1.6 Region : 6100
FDEPTH: 191 188 Gear cond.: 0
BDEPTH: 191 188 Validity : 0
Towing dir: 0° Wire out : 540 m Speed : 3.1 kn
Sorted : 165 Total catch: 593.89 Catch/hour: 1152.81

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lampanyctodes hectoris	388.22	0	33.68	
Merluccius capensis	176.87	773	15.34	401
Merluccius paradoxus	170.82	1351	14.82	403
Merluccius paradoxus	128.89	3541	11.18	404
Paracallionymus costatus	59.01	5901	5.12	
Parapagurus dimorphus	55.90	0	4.85	
Helicolenus dactylopterus	55.13	4721	4.78	405
Sepia australis	25.78	1718	2.24	
Lophius vomerinus	17.47	83	1.52	407
Todaropsis eblanae	13.98	311	1.21	410
URCHINS	12.39	155	1.07	
Brama brama	11.65	6	1.01	409
Callorhinchus capensis	11.65	4	1.01	
Chelidonichthys capensis	5.82	17	0.51	408
Starfish	5.81	0	0.50	
Congiopodus spinifer	4.32	47	0.37	
ANTHOZOA (Sea anemones)	3.01	16	0.26	
Schedophilus ovalis	2.14	2	0.19	
Caelorinchus simorhynchus	1.49	124	0.13	
Merluccius paradoxus	1.26	2	0.11	402
G A S T R O P O D S	1.13	31	0.10	
Lepidopus caudatus	0.57	16	0.05	
Cynoglossus zanzibarensis	0.26	16	0.02	406
Holohalaelurus regani	0.20	16	0.02	
Champsodon capensis	0.14	16	0.01	
Total	1153.92		100.10	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1336
DATE :25/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°22.17
start stop duration Lon E 17°17.36
TIME :07:05:58 07:36:45 30.8 (min) Purpose : 3
LOG : 3749.89 3751.59 1.7 Region : 6100
FDEPTH: 245 242 Gear cond.: 0
BDEPTH: 245 242 Validity : 0
Towing dir: 0° Wire out : 670 m Speed : 3.3 kn
Sorted : 244 Total catch: 978.09 Catch/hour: 1907.23

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1474.16	12088	77.29	412
Lampanyctodes hectoris	99.84	0	5.23	
Caelorinchus simorhynchus	68.44	1505	3.59	
Brama brama	58.50	33	3.07	419
Parapagurus dimorphus	47.38	0	2.48	
Paracallionymus costatus	43.80	3128	2.30	
Raja straeleni	24.37	12	1.28	
Thyrsites atun	21.45	6	1.12	418
Lophius vomerinus	13.76	74	0.72	416
Helicolenus dactylopterus	10.53	642	0.55	414
Merluccius paradoxus	7.80	10	0.41	413
Merluccius capensis	6.82	6	0.36	411
Callorhinchus capensis	5.85	12	0.31	
Holohalaelurus regani	4.87	23	0.26	
Lophius vomerinus	3.90	2	0.20	417
URCHINS	3.77	158	0.20	
ANTHOZOA (Sea anemones)	3.27	10	0.17	
Cynoglossus zanzibarensis	2.26	21	0.12	415
Congiopodus spinifer	1.29	10	0.07	
Todaropsis eblanae	1.11	31	0.06	421
Maurolicus muelleri	0.97	0	0.05	
G A S T R O P O D S	0.85	31	0.04	
Todaropsis eblanae	0.84	21	0.04	420
Starfish	0.82	0	0.04	
Mursia cristimanus	0.51	53	0.03	
Physiculus capensis	0.06	10	0.00	
Total	1907.23		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1337
DATE :25/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°27.48
start stop duration Lon E 17°3.04
TIME :09:36:04 10:06:07 30.1 (min) Purpose : 3
LOG : 3767.73 3769.41 1.7 Region : 6100
FDEPTH: 296 297 Gear cond.: 0
BDEPTH: 296 297 Validity : 0
Towing dir: 0° Wire out : 800 m Speed : 3.4 kn
Sorted : 143 Total catch: 142.66 Catch/hour: 284.84

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	111.81	797	39.26	423
Etrumeus whiteheadi	67.89	839	23.83	
Brama brama	60.90	38	21.38	427
Maurolicus muelleri	27.95	0	9.81	
Malacocephalus laevis	3.39	22	1.19	
Merluccius capensis	3.19	8	1.12	422
Caelorinchus simorhynchus	2.40	42	0.84	
Paracallionymus costatus	1.60	106	0.56	
Trachurus capensis	1.20	6	0.42	424
Helicolenus dactylopterus	1.02	22	0.36	425
Holohalaelurus regani	0.77	4	0.27	
Genypterus capensis	0.62	2	0.22	426
Lampanyctodes hectoris	0.60	0	0.21	
Starfish	0.42	0	0.15	
Parapagurus dimorphus	0.41	54	0.14	
Todaropsis eblanae	0.16	2	0.06	429
Lepidopus caudatus	0.16	2	0.05	
G A S T R O P O D S	0.13	0	0.05	
Todaropsis eblanae	0.13	2	0.05	428
Squilla sp.	0.05	6	0.02	
Mursia cristimanus	0.03	2	0.01	
Total	284.84		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1338
DATE :25/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 32°42.75
start stop duration Lon E 16°35.41
TIME :14:04:05 14:34:20 30.3 (min) Purpose : 3
LOG : 3802.56 3804.10 1.6 Region : 6100
FDEPTH: 691 689 Gear cond.: 0
BDEPTH: 691 689 Validity : 0
Towing dir: 0° Wire out : 1610 m Speed : 3.1 kn
Sorted : 159 Total catch: 159.15 Catch/hour: 315.67

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	152.73	73	48.38	430
Caelorinchus braueri	58.31	897	18.47	
Caelorinchus matamua	23.80	60	7.54	
Selachophidium guentheri	9.05	107	2.87	
Centrophorus squamosus	8.93	2	2.83	
Lepidion capensis	8.61	0	2.73	
Sergia sp.	8.43	0	2.67	
Chaceon sp.	6.72	0	2.13	
Apristurus saldanha	5.70	10	1.81	
Etmopterus brachyurus	3.97	14	1.26	
Notacanthus sexspinis	3.79	32	1.20	
Diastobranchus capensis	3.33	12	1.06	
Nezumia sp.	3.27	206	1.04	
Plesionika martia	2.90	0	0.92	
Photichthys argenteus	2.78	46	0.88	
Histioteuthis miranda	2.49	2	0.79	
Nezumia sp.	2.26	22	0.72	0
Funchalia woodwardi	2.12	0	0.67	
Kuronezumia leonis	1.55	4	0.49	
Hydrolagus africanus	0.99	2	0.31	
Hoplostethus atlanticus	0.99	2	0.31	
Myxine capensis	0.87	14	0.28	
Synaphobranchus kaupii	0.53	8	0.17	
Oreosoma atlanticum	0.41	4	0.13	
Xenodermichthys copei	0.29	18	0.09	
Lycodes agulhensis	0.20	2	0.06	
Chauliodus sloani	0.14	6	0.04	
G A S T R O P O D S	0.13	0	0.04	
Lycoteuthis lorigera	0.10	4	0.03	
Trachyscorpia eschmeyeri	0.09	2	0.03	
Notoscopelus sp.	0.07	2	0.02	
Diaphus sp.	0.04	12	0.01	
Starfish	0.04	0	0.01	
Gymnoscopelus sp.	0.03	2	0.01	
Stoloteuthis sp.	0.01	2	0.00	
Argyropelecus aculeatus	0.01	2	0.00	
Total	315.67		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1339
DATE :25/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 32°41.48
start stop duration Lon E 16°36.41
TIME :15:53:17 16:22:22 29.1 (min) Purpose : 3
LOG : 3808.62 3810.18 1.6 Region : 6100
FDEPTH: 590 586 Gear cond.: 0
BDEPTH: 590 586 Validity : 0
Towing dir: 0° Wire out : 1620 m Speed : 3.2 kn
Sorted : 168 Total catch: 167.91 Catch/hour: 346.33

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Notacanthus sexspinis	109.32	804	31.56	
Caelorinchus braueri	76.31	1440	22.04	
Merluccius paradoxus	59.81	39	17.27	431
Centrophorus squamosus	36.51	6	10.54	
Raja leopardus	17.74	85	5.12	
Genypterus capensis	9.49	2	2.74	433
Helicolenus dactylopterus	7.63	35	2.20	432
Lepidion capensis	5.53	142	1.60	
Psychrolutes macrocephalus	3.30	25	0.95	
Etmopterus brachyurus	3.30	29	0.95	
Plesionika martia	2.85	0	0.82	
Todarodes angolensis	2.81	2	0.81	434
Myxine capensis	2.60	43	0.75	
Malacocephalus laevis	1.24	4	0.36	
Lucigadus ori	1.03	136	0.30	
Photichthys argenteus	1.03	0	0.30	
Bassanago albescens	0.93	2	0.27	
Todarodes filippove	0.93	2	0.27	435
Selachophidium guentheri	0.85	10	0.24	
Hydrolagus africanus	0.72	2	0.21	
Lycodes agulhensis	0.49	4	0.14	
Lycoteuthis lorigera	0.41	12	0.12	
Caelorinchus matamua	0.35	2	0.10	
Bathypolypus valdiviae	0.32	4	0.09	
Synaphobranchus kaupii	0.31	2	0.09	
Trachyscorpia eschmeyeri	0.19	2	0.06	
Epigonus sp.	0.17	19	0.05	
Rossia enigmatica	0.12	4	0.03	
Careproctus griseldea	0.04	2	0.01	
Neoscopelus macrolepidotus	0.02	2	0.01	
Stoloteuthis sp.	0.01	2	0.00	
Total	346.33		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1340
DATE :25/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 32°41.32
start stop duration Lon E 16°39.29
TIME :17:27:30 17:27:30 30.0 (min) Purpose : 3
LOG : 3815.24 3816.89 1.7 Region : 6100
FDEPTH: 482 481 Gear cond.: 0
BDEPTH: 482 481 Validity : 0
Towing dir: 0° Wire out : 1300 m Speed : 2.9 kn
Sorted : 294 Total catch: 539.46 Catch/hour: 1078.92

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Notacanthus sexspinis	539.00	8166	49.96	
Merluccius paradoxus	432.00	816	40.04	436
Helicolenus dactylopterus	36.00	190	3.34	437
Caelorinchus simorhynchus	33.06	584	3.06	
Chaceon sp.	5.84	66	0.54	
Myxine capensis	4.90	78	0.45	
ANTHOZOA (Sea anemones)	4.33	0	0.40	
Starfish	3.91	0	0.36	
Hoplostethus mediterraneus	2.81	22	0.26	
Todarodes angolensis	2.75	4	0.26	438
Holohalaelurus regani	2.70	4	0.25	
Raja leopardus	2.44	8	0.23	
Cruriraja parcomaculata	2.00	2	0.19	
Tripterophycis gilchristi	1.39	44	0.13	
Rossia enigmatica	1.12	34	0.10	
Chlorophthalmus sp.	0.85	12	0.08	
Bassanago albescens	0.76	12	0.07	
Lucigadus ori	0.73	56	0.07	
Physiculus capensis	0.61	34	0.06	
Photichthys argenteus	0.58	12	0.05	
Paracallionymus costatus	0.51	66	0.05	
G A S T R O P O D S	0.44	0	0.04	
Bathypolypus valdiviae	0.20	12	0.02	
Total	1078.92		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1341
DATE :26/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°1.05
start stop duration Lon E 17°12.92
TIME :04:40:53 05:10:05 29.2 (min) Purpose : 3
LOG : 3891.06 3892.70 1.6 Region : 6100
FDEPTH: 201 198 Gear cond.: 0
BDEPTH: 201 198 Validity : 0
Towing dir: 0° Wire out : 590 m Speed : 3.4 kn
Sorted : 119 Total catch: 379.01 Catch/hour: 778.78

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	188.22	873	24.17	439
Merluccius paradoxus	143.20	2178	18.39	441
Merluccius paradoxus	131.92	4919	16.94	440
Lampanyctodes hectoris	89.79	29774	11.53	
Sepia australis	60.21	9263	7.73	
Paracallionymus costatus	57.95	5268	7.44	
URCHINS	23.59	0	3.03	
Helicolenus dactylopterus	15.08	845	1.94	442
Genypterus capensis	15.00	33	1.93	445
Holohalaelurus regani	13.42	407	1.72	
Chelidonichthys capensis	8.22	25	1.06	447
Lophius vomerinus	6.16	27	0.79	444
Caelorinchus simorhynchus	4.43	150	0.57	
Squilla sp.	3.41	421	0.44	
Mursia cristimanus	3.35	271	0.43	
Starfish	3.22	0	0.41	
Etrumeus whiteheadi	2.78	45	0.36	
Cynoglossus zanzibarensis	1.73	23	0.22	443
Maurolicus muelleri	1.58	0	0.20	
Zeus capensis	1.34	23	0.17	446
G A S T R O P O D S	1.21	0	0.16	
Exodromidia sp.	0.92	53	0.12	
Parapagurus dimorphus	0.75	136	0.10	
Solenocera africana	0.53	53	0.07	
Sepia hieronis	0.43	8	0.05	
Todaropsis eblanae	0.21	8	0.03	448
Caelorinchus braueri	0.07	8	0.01	
Physiculus capensis	0.06	8	0.01	
Goneplax angulata	0.02	8	0.00	
Inioteuthis capensis	0.01	8	0.00	
Total	778.78		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1342
DATE :26/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°8.90
start stop duration Lon E 17°0.49
TIME :07:12:15 07:44:22 32.1 (min) Purpose : 3
LOG : 3910.10 3911.83 1.7 Region : 6100
FDEPTH: 269 269 Gear cond.: 0
BDEPTH: 269 269 Validity : 0
Towing dir: 0° Wire out : 740 m Speed : 3.2 kn
Sorted : 207 Total catch: 589.99 Catch/hour: 1102.10

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	669.49	9476	60.75	450
Etrumeus whiteheadi	146.45	2092	13.29	
Merluccius capensis	65.98	228	5.99	449
Paracallionymus costatus	62.76	5303	5.70	
Caelorinchus simorhynchus	40.65	1270	3.69	
Lophius vomerinus	29.89	75	2.71	454
Helicolenus dactylopterus	20.94	712	1.90	451
Holohalaelurus regani	11.77	136	1.07	
Callorhinchus capensis	9.34	4	0.85	
Parapagurus dimorphus	6.94	742	0.63	
Raja straeleni	6.35	2	0.58	
Lampanyctodes hectoris	5.98	0	0.54	
Brama brama	5.60	4	0.51	456
Todaropsis eblanae	3.59	60	0.33	458
URCHINS	3.48	0	0.32	
Starfish	3.47	0	0.31	
Rossia enigmatica	2.88	13	0.26	
Todaropsis eblanae	1.37	30	0.12	457
Mursia cristimanus	1.23	138	0.11	
G A S T R O P O D S	1.22	0	0.11	
Genypterus capensis	0.78	6	0.07	455
Sardinops ocellatus	0.55	6	0.05	
Cynoglossus zanzibarensis	0.38	6	0.03	452
Sepia hieronis	0.34	19	0.03	
Squilla sp.	0.28	35	0.03	
Exodromidia sp.	0.19	11	0.02	
Lophius vomerinus	0.19	6	0.02	453
Sepia sp.	0.02	6	0.00	
Total	1102.10		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1343
DATE :26/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°13.78
start stop duration Lon E 16°46.13
TIME :09:44:43 10:14:53 30.2 (min) Purpose : 3
LOG : 3927.94 3929.58 1.6 Region : 6100
FDEPTH: 322 322 Gear cond.: 0
BDEPTH: 322 322 Validity : 0
Towing dir: 0° Wire out : 850 m Speed : 3.3 kn
Sorted :1450 Total catch: 1450.06 Catch/hour: 2883.77

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	2364.60	5481	82.00	
Merluccius paradoxus	302.29	2066	10.48	460
Zeus capensis	79.55	147	2.76	465
Brama brama	51.71	36	1.79	466
Caelorinchus simorhynchus	25.85	340	0.90	
Merluccius paradoxus	12.93	12	0.45	461
Etrumeus whiteheadi	7.76	103	0.27	
Malacocephalus laevis	5.97	16	0.21	
Genypterus capensis	5.97	16	0.21	464
Raja straeleni	5.97	2	0.21	
Helicolenus dactylopterus	5.97	50	0.21	462
Holohalaelurus regani	5.41	24	0.19	
Merluccius capensis	4.57	2	0.16	459
Squalus mitsukurii	1.83	2	0.06	
Trachurus capensis	1.21	6	0.04	
Lophius vomerinus	1.21	2	0.04	463
Paracallionymus costatus	0.89	46	0.03	
Todaropsis eblanae	0.05	6	0.00	467
Todaropsis eblanae	0.04	4	0.00	468
Total	2883.77		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1344
DATE :26/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°21.36
start stop duration Lon E 16°34.49
TIME :12:38:05 13:08:09 30.1 (min) Purpose : 3
LOG : 3947.64 3949.18 1.5 Region : 6100
FDEPTH: 392 388 Gear cond.: 0
BDEPTH: 392 388 Validity : 0
Towing dir: 0° Wire out : 1040 m Speed : 3.1 kn
Sorted : 673 Total catch: 672.93 Catch/hour: 1343.61

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	1126.12	2692	83.81	470
Caelorinchus simorhynchus	51.91	665	3.86	
Helicolenus dactylopterus	51.91	274	3.86	472
Brama brama	45.92	28	3.42	475
Merluccius paradoxus	19.97	14	1.49	469
Genypterus capensis	16.97	18	1.26	474
Holohalaelurus regani	10.07	30	0.75	
Lophius vomerinus	5.99	2	0.45	473
Malacocephalus laevis	5.57	16	0.41	
Scyliorhinus capensis	2.00	2	0.15	
Todarodes angolensis	1.42	2	0.11	477
Todaropsis eblanae	1.38	10	0.10	476
Lucigadus ori	0.94	104	0.07	
Schedophilus huttoni	0.93	2	0.07	
Paracallionymus costatus	0.70	68	0.05	
Epigonus sp.	0.41	44	0.03	
Tripterophycis gilchristi	0.27	12	0.02	
Lampanyctodes hectoris	0.26	0	0.02	
Physiculus capensis	0.24	18	0.02	
Lycoteuthis lorigera	0.21	14	0.02	
Hoplostethus mediterraneus	0.17	2	0.01	
Rossia enigmatica	0.07	2	0.01	
Symbolophorus boops	0.06	4	0.00	
Champsodon capensis	0.03	2	0.00	
Sepia sp.	0.02	6	0.00	
Merluccius paradoxus	0.02	4	0.00	471
Argentina sp.	0.02	2	0.00	
Cranchia scabra	0.02	2	0.00	
Diaphus sp.	0.01	4	0.00	
Electrona risso	0.01	2	0.00	
Total	1343.61		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1345
DATE :26/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°21.70
start stop duration Lon E 16°28.72
TIME :14:36:33 15:06:43 30.2 (min) Purpose : 3
LOG : 3958.32 3959.86 1.5 Region : 6100
FDEPTH: 460 455 Gear cond.: 0
BDEPTH: 460 455 Validity : 0
Towing dir: 0° Wire out : 1220 m Speed : 3.1 kn
Sorted : 326 Total catch: 343.40 Catch/hour: 682.93

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	495.19	742	72.51	478
Helicolenus dactylopterus	57.67	479	8.45	479
Caelorinchus simorhynchus	42.96	1022	6.29	
Genypterus capensis	23.86	8	3.49	481
Shrimps, small, non comm.	13.03	0	1.91	
Bassanago albescens	12.19	26	1.79	
Photichthys argenteus	11.49	338	1.68	
Brama brama	7.95	4	1.16	482
Lophius vomerinus	6.56	4	0.96	480
Caelorinchus braueri	3.94	328	0.58	
Holohalaelurus regani	1.99	6	0.29	
Myxine capensis	1.40	18	0.20	
Lampanyctodes hectoris	1.24	0	0.18	
Hoplostethus mediterraneus	0.67	4	0.10	
Synagrops japonicus	0.48	2	0.07	
PARALEPIDIDAE	0.44	4	0.06	
Teuthowenia sp.	0.39	4	0.06	
Selachophidium guentheri	0.37	4	0.05	
Lycoteuthis lorigera	0.31	36	0.05	
Paracallionymus costatus	0.25	44	0.04	
Symbolophorus boops	0.15	14	0.02	
Ophichthus bennettai	0.13	2	0.02	
Argentina sp.	0.08	4	0.01	
Gymnoscopelus sp.	0.08	10	0.01	
Gonostoma elongatum	0.07	18	0.01	
Diaphus sp.	0.03	10	0.00	
Total	682.93		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1346
DATE :26/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 32°23.67
start stop duration Lon E 16°24.76
TIME :16:46:48 17:16:04 29.3 (min) Purpose : 3
LOG : 3967.71 3969.38 1.7 Region : 6100
FDEPTH: 559 552 Gear cond.: 0
BDEPTH: 559 552 Validity : 0
Towing dir: 0° Wire out : 1450 m Speed : 3.4 kn
Sorted : 140 Total catch: 220.09 Catch/hour: 451.46

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	149.74	176	33.17	483
Caelorinchus braueri	93.95	2135	20.81	
Chaceon sp.	35.20	0	7.80	
Funchalia woodwardi	31.69	0	7.02	
Photichthys argenteus	17.03	630	3.77	
P O L Y C H A E T A	16.41	0	3.63	
Raja leopardus	14.67	96	3.25	
Centrophorus squamosus	11.28	2	2.50	
Myxine capensis	11.16	0	2.47	
Etmopterus brachyurus	10.87	66	2.41	0
Starfish	10.30	0	2.28	
Helicolenus dactylopterus	10.26	47	2.27	484
Etmopterus brachyurus	8.74	111	1.94	
Sergia sp.	8.21	0	1.82	
Selachophidium guentheri	2.87	29	0.64	
Sea cucumber	2.79	0	0.62	
Todarodes angolensis	2.46	2	0.55	485
Bathypolypus valdiviae	2.04	23	0.45	
ANTHOZOA (Sea anemones)	1.95	0	0.43	
G A S T R O P O D S	1.89	0	0.42	
Caelorinchus matamua	1.70	6	0.38	
Todarodes angolensis	1.23	2	0.27	486
Lucigadus ori	1.06	129	0.23	
Hydrolagus africanus	1.03	2	0.23	
Bassanago albescens	1.02	6	0.23	
Notacanthus sexspinis	0.67	23	0.15	
Synaphobranchus kaupii	0.53	6	0.12	
Psychrolutes macrocephalus	0.35	6	0.08	
Myctophum sp.	0.09	12	0.02	
Gymnoscopelus sp.	0.08	12	0.02	
PARALEPIDIDAE	0.07	6	0.01	
Diaphus sp.	0.04	12	0.01	
Gonostoma sp.	0.03	6	0.01	
Nezumia sp.	0.03	6	0.01	
Argyropelecus aculeatus	0.03	6	0.01	
Total	451.46		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1347
DATE :27/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 31°39.87
start stop duration Lon E 17°3.81
TIME :04:27:37 04:57:26 29.8 (min) Purpose : 3
LOG : 4047.30 4048.94 1.6 Region : 6100
FDEPTH: 262 260 Gear cond.: 0
BDEPTH: 262 260 Validity : 0
Towing dir: 0° Wire out : 690 m Speed : 3.3 kn
Sorted : 183 Total catch: 2356.26 Catch/hour: 4740.97

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	4362.17	47258	92.01	488
Trachurus capensis	139.84	559	2.95	489
Caelorinchus simorhynchus	95.17	1831	2.01	
Lampanyctodes hectoris	36.42	0	0.77	
Paracallionymus costatus	22.36	1034	0.47	
Starfish	22.07	0	0.47	
Malacocephalus laevis	19.72	28	0.42	
Merluccius capensis	10.06	6	0.21	487
Lophius vomerinus	8.06	6	0.17	491
Helicolenus dactylopterus	5.35	141	0.11	490
Thyrsites atun	5.03	2	0.11	492
Parapagurus dimorphus	4.86	755	0.10	
Genypterus capensis	2.43	2	0.05	493
Raja straeleni	2.01	2	0.04	
Todarodes angolensis	1.71	2	0.04	495
Zeus capensis	1.49	28	0.03	494
Myxine capensis	1.15	28	0.02	
Rochinia sp.	0.42	223	0.01	
URCHINS	0.39	28	0.01	
Exodromidia sp.	0.11	56	0.00	
Lolliguncula mercatoris	0.11	28	0.00	
Total	4740.96		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1348
DATE :27/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 31°45.58
start stop duration Lon E 16°55.87
TIME :06:44:39 07:14:13 29.6 (min) Purpose : 3
LOG : 4062.18 4063.83 1.6 Region : 6100
FDEPTH: 289 291 Gear cond.: 0
BDEPTH: 289 291 Validity : 0
Towing dir: 0° Wire out : 765 m Speed : 3.3 kn
Sorted : 206 Total catch: 1744.33 Catch/hour: 3539.39

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	3205.95	32246	90.58	497
Lampanyctodes hectoris	101.45	0	2.87	
Trachurus capensis	40.58	122	1.15	499
PORIFERA (Sponges)	39.53	0	1.12	
Caelorinchus simorhynchus	34.49	933	0.97	
Lophius vomerinus	24.35	16	0.69	501
Merluccius capensis	20.29	10	0.57	496
URCHINS	19.32	0	0.55	
Starfish	9.98	0	0.28	
Helicolenus dactylopterus	8.12	53	0.23	500
Holohalaelurus regani	5.97	22	0.17	
Merluccius paradoxus	5.78	8	0.16	498
Maurolicus muelleri	4.06	0	0.11	
G A S T R O P O D S	3.83	81	0.11	
Genypterus capensis	3.55	10	0.10	502
Todaropsis eblanae	2.41	81	0.07	504
Mursia cristimanus	2.29	61	0.06	
Todarodes angolensis	2.07	2	0.06	503
Rossia enigmatica	1.79	61	0.05	
Sepia hieronis	0.79	20	0.02	
Parapagurus pilosimanus	0.69	20	0.02	
Paracallionymus costatus	0.63	61	0.02	
Parapagurus dimorphus	0.49	122	0.01	
Physiculus capensis	0.32	20	0.01	
Rochinia sp.	0.22	61	0.01	
Lucigadus ori	0.12	20	0.00	
Sepia sp.	0.12	41	0.00	
Sepia australis	0.10	20	0.00	
Exodromidia sp.	0.08	20	0.00	
Total	3539.39		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1349
DATE :27/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 31°57.42
start stop duration Lon E 16°38.33
TIME :10:00:00 10:30:11 30.2 (min) Purpose : 3
LOG : 4086.56 4088.24 1.7 Region : 6100
FDEPTH: 343 343 Gear cond.: 0
BDEPTH: 343 343 Validity : 0
Towing dir: 0° Wire out : 920 m Speed : 3.3 kn
Sorted : 485 Total catch: 485.04 Catch/hour: 964.60

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	306.26	2172	31.75	506
Zeus capensis	298.31	630	30.93	510
Tube corals	85.12	0	8.82	
Brama brama	59.66	34	6.19	511
PORIFERA (Sponges)	56.88	0	5.90	
Caelorinchus simorhynchus	35.60	410	3.69	
Helicolenus dactylopterus	33.81	314	3.50	508
Octopus magnificus	20.88	4	2.16	
Lepidopus caudatus	13.72	34	1.42	
Holohalaelurus regani	6.96	26	0.72	
Starfish	6.62	0	0.69	
Schedophilus ovalis	5.97	2	0.62	
Genypterus capensis	5.77	6	0.60	509
Malacocephalus laevis	4.77	28	0.49	
Merluccius paradoxus	4.77	4	0.49	507
ANTHOZOA (Sea anemones)	3.50	8	0.36	
Squalus megalops	2.98	6	0.31	
Merluccius capensis	2.51	2	0.26	505
Mursia cristimanus	1.65	0	0.17	
Todaropsis eblanae	1.49	22	0.15	513
Todarodes angolensis	1.29	2	0.13	514
URCHINS	1.05	12	0.11	
Rossia enigmatica	0.97	26	0.10	
Parapagurus pilosimanus	0.91	0	0.09	
Epigonus telescopus	0.79	8	0.08	
Rochinia sp.	0.54	0	0.06	
Sepia hieronis	0.43	8	0.04	
Lucigadus ori	0.40	12	0.04	
Notacanthus sexspinis	0.35	2	0.04	
Exodromidia sp.	0.26	0	0.03	
Todaropsis eblanae	0.21	2	0.02	512
Paracallionymus costatus	0.14	18	0.01	
Sepia sp.	0.03	6	0.00	
Total	964.60		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1350
DATE :27/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 31°59.33
start stop duration Lon E 16°24.98
TIME :12:36:18 13:07:24 31.1 (min) Purpose : 3
LOG : 4102.89 4104.48 1.6 Region : 6100
FDEPTH: 402 398 Gear cond.: 0
BDEPTH: 402 398 Validity : 0
Towing dir: 0° Wire out : 1080 m Speed : 3.1 kn
Sorted : 571 Total catch: 1497.07 Catch/hour: 2888.23

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	2025.72	8441	70.14	517
Helicolenus dactylopterus	218.01	901	7.55	518
Caelorinchus simorhynchus	162.06	1385	5.61	
Brama brama	146.62	100	5.08	522
Malacocephalus laevis	100.32	48	3.47	
Merluccius paradoxus	94.53	69	3.27	516
Holohalaelurus regani	27.11	54	0.94	
ANTHOZOA (Sea anemones)	16.72	118	0.58	
Squalus mitsukurii	12.54	4	0.43	
Todarodes angolensis	11.58	10	0.40	523
Zeus capensis	11.58	21	0.40	521
Lepidopus caudatus	11.37	17	0.39	
Epigonus telescopus	10.21	199	0.35	
Genypterus capensis	9.65	8	0.33	520
Lophius vomerinus	7.72	4	0.27	519
Merluccius capensis	7.72	2	0.27	515
Todaropsis eblanae	5.77	44	0.20	524
Bassanago albescens	4.44	4	0.15	
Starfish	1.62	0	0.06	
Paracallionymus costatus	0.80	98	0.03	
Lucigadus ori	0.55	64	0.02	
G A S T R O P O D S	0.50	54	0.02	
Rochinia sp.	0.44	125	0.02	
Sepia sp.	0.39	10	0.01	
Rossia enigmatica	0.29	10	0.01	
Total	2888.23		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1351
DATE :27/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°2.72
start stop duration Lon E 16°16.92
TIME :14:59:40 15:29:48 30.1 (min) Purpose : 3
LOG : 4115.84 4117.45 1.6 Region : 6100
FDEPTH: 480 484 Gear cond.: 0
BDEPTH: 480 484 Validity : 0
Towing dir: 0° Wire out : 1330 m Speed : 3.2 kn
Sorted : 689 Total catch: 775.44 Catch/hour: 1543.68

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1067.02	2212	69.12	526
Funchalia woodwardi	241.87	32250	15.67	
Merluccius paradoxus	73.66	58	4.77	525
Genypterus capensis	58.73	20	3.80	529
Lophius vomerinus	13.93	8	0.90	528
Malacocephalus laevis	11.94	30	0.77	
Helicolenus dactylopterus	11.94	42	0.77	527
Brama brama	9.95	6	0.64	530
Caelorinchus simorhynchus	7.74	191	0.50	
Chaceon sp.	7.50	82	0.49	
Photichthys argenteus	7.46	322	0.48	
Ruvettus pretiosus	5.18	2	0.34	
Starfish	3.92	0	0.25	
Lycoteuthis lorigera	3.26	237	0.21	
Todarodes angolensis	2.79	4	0.18	533
Holohalaelurus regani	2.69	8	0.17	
Todarodes angolensis	2.69	2	0.17	532
ANTHOZOA (Sea anemones)	2.51	10	0.16	
Caelorinchus braueri	1.81	187	0.12	
Lucigadus ori	1.51	187	0.10	
G A S T R O P O D S	1.21	40	0.08	
Beryx splendens	0.91	6	0.06	
Parapagurus pilosimanus	0.90	40	0.06	
Todaropsis eblanae	0.76	6	0.05	531
Rossia enigmatica	0.66	20	0.04	
Paracallionymus costatus	0.35	46	0.02	
Physiculus capensis	0.23	10	0.02	
Bassanago albescens	0.23	6	0.02	
Stereomastis sp.	0.07	10	0.00	
Sepia sp.	0.05	6	0.00	
Rochinia sp.	0.02	16	0.00	
Total	1543.50		99.99	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1352
DATE :27/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 32°4.15
start stop duration Lon E 16°13.54
TIME :17:07:52 17:37:06 29.2 (min) Purpose : 3
LOG : 4126.97 4128.73 1.8 Region : 6100
FDEPTH: 567 580 Gear cond.: 0
BDEPTH: 567 580 Validity : 0
Towing dir: 0° Wire out : 1500 m Speed : 3.6 kn
Sorted : 81 Total catch: 80.53 Catch/hour: 165.37

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	92.40	129	55.88	534
Photichthys argenteus	29.57	844	17.88	
Caelorinchus braueri	13.55	183	8.20	
Deania profundorum	7.19	4	4.35	
Funchalia woodwardi	4.74	0	2.87	
Helicolenus dactylopterus	3.70	23	2.24	535
Malacocephalus laevis	3.02	10	1.83	
Selachophidium guentheri	2.46	25	1.49	
Etmopterus brachyurus	1.74	23	1.05	
Raja leopardus	1.64	8	0.99	
Lophius vomerinus	1.44	2	0.87	536
Notacanthus sexspinis	1.31	12	0.79	
ANTHOZOA (Sea anemones)	0.52	2	0.32	
Lycoteuthis lorigera	0.51	23	0.31	
Ophichthus bennettai	0.40	2	0.24	
Plesionika martia	0.23	37	0.14	
Psychrolutes macrocephalus	0.22	6	0.13	
Starfish	0.19	0	0.12	
Chaceon sp.	0.18	2	0.11	
Symbolophorus boops	0.12	10	0.07	
Myxine capensis	0.12	2	0.07	
G A S T R O P O D S	0.04	8	0.03	
PARALEPIDIDAE	0.03	2	0.02	
Xenodermichthys copei	0.02	2	0.01	
Neoscopelus macrolepidotus	0.02	2	0.01	
Total	165.37		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1353
DATE :28/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 31°27.83
start stop duration Lon E 16°40.22
TIME :04:44:04 05:09:41 25.6 (min) Purpose : 3
LOG : 4198.81 4200.22 1.4 Region : 6100
FDEPTH: 307 304 Gear cond.: 0
BDEPTH: 307 304 Validity : 0
Towing dir: 0° Wire out : 780 m Speed : 3.3 kn
Sorted : 142 Total catch: 488.45 Catch/hour: 1143.91

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	721.31	6799	63.06	538
Caelorinchus simorhynchus	91.33	981	7.98	
PORIFERA (Sponges)	89.23	0	7.80	
Helicolenus dactylopterus	60.98	569	5.33	540
Merluccius capensis	45.67	14	3.99	537
Zeus capensis	37.26	101	3.26	545
Chelidonichthys queketti	15.27	82	1.33	546
Holohalaelurus regani	9.37	37	0.82	
Malacocephalus laevis	8.20	61	0.72	
Ruvettus pretiosus	7.03	2	0.61	
Lophius vomerinus	7.03	5	0.61	543
URCHINS	6.67	82	0.58	
Starfish	6.65	0	0.58	
Callorhinchus capensis	5.39	2	0.47	
Merluccius paradoxus	4.68	2	0.41	539
Squalus mitsukurii	4.68	2	0.41	
Todaropsis eblanae	4.68	61	0.41	547
Lepidopus caudatus	3.28	5	0.29	
Cynoglossus zanzibarensis	2.96	30	0.26	542
Genypterus capensis	2.81	7	0.25	544
Epigonus sp.	2.16	61	0.19	
Parapagurus pilosimanus	1.12	70	0.10	
Rossia enigmatica	1.08	52	0.09	
Paracallionymus costatus	0.99	173	0.09	
G A S T R O P O D S	0.87	0	0.08	
Exodromidia sp.	0.80	131	0.07	
Helicolenus dactylopterus	0.76	649	0.07	541
Sepia hieronis	0.69	9	0.06	
Mursia cristimanus	0.54	70	0.05	
Rochinia sp.	0.24	61	0.02	
ANTHOZOA (Sea anemones)	0.21	9	0.02	
Parapagurus dimorphus	0.06	30	0.01	
Physiculus capensis	0.06	9	0.00	
Total	1144.06		100.01	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1354
DATE :28/01/2007 GEAR TYPE: BT NO: 18 POSITION:Lat S 31°40.70
start stop duration Lon E 16°21.43
TIME :08:33:29 08:57:20 23.9 (min) Purpose : 3
LOG : 4227.15 4228.47 1.3 Region : 6100
FDEPTH: 377 382 Gear cond.: 8
BDEPTH: 377 382 Validity : 1
Towing dir: 0° Wire out : 970 m Speed : 3.3 kn
Sorted : 364 Total catch: 364.07 Catch/hour: 915.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	410.06	0	44.77	
Lepidopus caudatus	133.33	533	14.56	
Epigonus sp.	120.75	2377	13.18	
Merluccius capensis	49.06	0	5.36	
Caelorinchus simorhynchus	47.80	274	5.22	
Helicolenus dactylopterus	40.25	0	4.39	
CORAL	33.03	0	3.61	
Malacocephalus laevis	20.13	38	2.20	
PORIFERA (Sponges)	14.14	0	1.54	
Scyliorhinus capensis	7.55	8	0.82	
Holohalaelurus regani	6.29	18	0.69	
Zeus capensis	5.53	0	0.60	
Todarodes angolensis	5.28	8	0.58	550
Merluccius paradoxus	5.03	5	0.55	548
Cyttus traversi	4.28	10	0.47	
Lophius vomerinus	3.27	3	0.36	549
Todaropsis eblanae, female	1.94	0	0.21	
Parapagurus pilosimanus	1.75	103	0.19	
Starfish	1.74	0	0.19	
URCHINS	1.11	0	0.12	
G A S T R O P O D S	0.83	0	0.09	
Todaropsis eblanae, male	0.55	0	0.06	
Paracallionymus costatus	0.46	65	0.05	
Mursia cristimanus	0.39	43	0.04	
Lucigadus ori	0.38	35	0.04	
Rochinia sp.	0.34	0	0.04	
Exodromidia sp.	0.21	38	0.02	
Cynoglossus zanzibarensis	0.19	3	0.02	551
Rossia enigmatica	0.18	3	0.02	
Symbolophorus boops	0.03	3	0.00	
Sepia sp.	0.01	0	0.00	
Total	915.90		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1355
DATE :28/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°45.20
start stop duration Lon E 16°12.21
TIME :11:41:38 12:12:08 30.5 (min) Purpose : 3
LOG : 4249.44 4251.02 1.6 Region : 6100
FDEPTH: 455 454 Gear cond.: 0
BDEPTH: 455 454 Validity : 0
Towing dir: 0° Wire out : 1260 m Speed : 3.1 kn
Sorted : 501 Total catch: 501.35 Catch/hour: 986.26

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	682.62	2176	69.21	553
Brama brama	74.75	47	7.58	557
Bassanago albescens	59.02	100	5.98	
Merluccius paradoxus	53.11	51	5.39	552
Lepidopus caudatus	27.54	30	2.79	
Lophius vomerinus	17.70	14	1.80	555
Genypterus capensis	16.72	8	1.70	556
Caelorinchus simorhynchus	14.95	138	1.52	
Malacocephalus laevis	11.80	26	1.20	
Helicolenus dactylopterus	7.87	41	0.80	554
Todarodes angolensis	6.30	8	0.64	558
Todarodes angolensis	3.54	8	0.36	559
Octopus magnificus, female	3.15	2	0.32	
Holohalaelurus regani	2.36	6	0.24	
Epigonus telescopus	1.77	100	0.18	
Paracallionymus costatus	1.30	171	0.13	
Caelorinchus braueri	0.55	63	0.06	
Lucigadus ori	0.55	49	0.06	
Starfish	0.40	0	0.04	
Lycoteuthis lorigera	0.09	22	0.01	
G A S T R O P O D S	0.06	0	0.01	
Stereomastis sp.	0.04	0	0.00	
Sepia sp.	0.03	4	0.00	
Psychrolutes macrocephalus	0.02	2	0.00	
PARALEPIDIDAE	0.02	2	0.00	
Total	986.26		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1356
DATE :28/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°47.31
start stop duration Lon E 16°1.05
TIME :14:20:07 14:50:37 30.5 (min) Purpose : 3
LOG : 4264.39 4265.96 1.6 Region : 6100
FDEPTH: 563 572 Gear cond.: 0
BDEPTH: 563 572 Validity : 0
Towing dir: 0° Wire out : 1570 m Speed : 3.1 kn
Sorted : 112 Total catch: 111.70 Catch/hour: 219.74

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	95.80	159	43.60	560
Helicolenus dactylopterus	74.75	279	34.02	561
Caelorinchus braueri	17.70	24	8.06	
Photichthys argenteus	8.85	450	4.03	
Malacocephalus laevis	7.28	24	3.31	
Ommastrephes bartrami	6.30	2	2.86	564
Raja leopardus	1.77	0	0.80	
Todarodes angolensis	1.67	2	0.76	563
Selachophidium guentheri	1.27	16	0.58	
Lophius vomerinus	1.02	2	0.46	562
Hydrolagus africanus	0.71	2	0.32	
Lycoteuthis lorigera	0.65	55	0.29	
Plesionika martia	0.52	0	0.23	
Scopelosaurus meadi	0.33	2	0.15	
Starfish	0.29	0	0.13	
Nezumia sp.	0.23	4	0.10	
Rossia enigmatica	0.15	6	0.07	
Myxine capensis	0.13	2	0.06	
Symbolophorus boops	0.11	8	0.05	
Lucigadus ori	0.10	12	0.05	
Diaphus sp.	0.06	20	0.03	
Chaceon sp.	0.03	0	0.01	
Electrona risso	0.01	2	0.01	
Stoloteuthis sp.	0.01	4	0.01	
Total	219.74		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1357
DATE :28/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°55.38
start stop duration Lon E 16°1.78
TIME :16:33:41 17:03:08 29.5 (min) Purpose : 3
LOG : 4274.61 4276.24 1.6 Region : 6100
FDEPTH: 686 673 Gear cond.: 0
BDEPTH: 686 673 Validity : 0
Towing dir: 0° Wire out : 1800 m Speed : 3.3 kn
Sorted : 121 Total catch: 120.92 Catch/hour: 246.35

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Caelorinchus braueri	71.31	572	28.95	
Merluccius paradoxus	52.97	41	21.50	565
Funchalia woodwardi	28.52	0	11.58	
Photichthys argenteus	20.37	678	8.27	
Bathyraja smithii	17.32	2	7.03	
Caelorinchus matamua	12.22	67	4.96	
Hoplostethus atlanticus	7.74	24	3.14	
Notacanthus sexspinis	6.72	75	2.73	
Malacocephalus laevis	6.11	18	2.48	
Etmopterus brachyurus	5.23	18	2.12	
Nezumia sp.	3.06	41	1.24	
Selachophidium guentheri	2.16	22	0.88	
Oreosoma atlanticum	2.05	14	0.83	
Todarodes angolensis	1.81	2	0.74	567
Synaphobranchus kaupii	1.16	12	0.47	
Myxine capensis	0.98	14	0.40	
Sergia sp.	0.98	0	0.40	
Shrimps, small, non comm.	0.97	0	0.39	
Chaceon sp.	0.80	10	0.32	
Helicolenus dactylopterus	0.75	6	0.31	566
Psychrolutes macrocephalus	0.74	4	0.30	
ANTHOZOA (Sea anemones)	0.49	0	0.20	
Neoscopelus macrolepidotus	0.47	16	0.19	
Raja leopardus	0.29	8	0.12	
Plesionika martia	0.26	0	0.11	
Hoplostethus cadenati	0.21	12	0.08	
Apristurus saldanha	0.15	2	0.06	
Aristaeomorpha foliacea	0.11	10	0.04	
Diastobranchus capensis	0.11	2	0.04	
Hydrolagus africanus	0.07	4	0.03	
Gymnoscopelus sp.	0.06	8	0.02	
Nemichthys scolopaceus	0.06	2	0.02	
Diaphus sp.	0.03	8	0.01	
Symbolophorus boops	0.03	2	0.01	
PARALEPIDIDAE	0.02	2	0.01	
Argyropelecus aculeatus	0.01	2	0.01	
Lycoteuthis lorigera	0.00	2	0.00	
Hoplostethus mediterraneus	0.00	2	0.00	
Total	246.35		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1358
DATE :29/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°54.39
start stop duration Lon E 17°3.82
TIME :04:43:29 05:13:55 30.4 (min) Purpose : 3
LOG : 4368.95 4370.70 1.8 Region : 6100
FDEPTH: 203 196 Gear cond.: 0
BDEPTH: 203 196 Validity : 0
Towing dir: 0° Wire out : 580 m Speed : 3.5 kn
Sorted : 186 Total catch: 338.06 Catch/hour: 666.35

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Hexanchus griseus, female	157.69	2	23.66	
Merluccius paradoxus	143.50	2754	21.53	569
Etrumeus whiteheadi	110.38	1839	16.57	
Merluccius capensis	91.31	359	13.70	568
Maurolicus muelleri	26.02	0	3.90	
Chelidonichthys capensis	23.65	59	3.55	575
PORIFERA (Sponges)	19.81	0	2.97	
Helicolenus dactylopterus	18.28	1463	2.74	571
Sepia australis	16.32	836	2.45	
Merluccius paradoxus	16.31	1265	2.45	570
Todaropsis eblanae	12.42	248	1.86	579
Paracallionymus costatus	9.86	897	1.48	
Lophius vomerinus	7.88	65	1.18	572
Brama brama	3.25	2	0.49	576
Todaropsis eblanae	2.37	51	0.36	578
Holohalaelurus regani	2.07	14	0.31	
Caelorinchus simorhynchus	1.91	118	0.29	
Genypterus capensis	1.18	8	0.18	573
Squilla sp.	1.04	110	0.16	
Todarodes angolensis	0.59	2	0.09	577
Zeus capensis	0.40	6	0.06	574
Lolliguncula mercatoris	0.11	51	0.02	
Total	666.35		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1359
DATE :29/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°59.58
start stop duration Lon E 16°52.11
TIME :07:11:32 07:41:35 30.1 (min) Purpose : 3
LOG : 4385.83 4387.43 1.6 Region : 6100
FDEPTH: 228 230 Gear cond.: 0
BDEPTH: 228 230 Validity : 0
Towing dir: 0° Wire out : 620 m Speed : 3.2 kn
Sorted : 211 Total catch: 516.98 Catch/hour: 1032.24

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	527.12	6924	51.07	582
Helicolenus dactylopterus	111.81	2811	10.83	584
Merluccius capensis	63.89	52	6.19	580
PORIFERA (Sponges)	61.90	0	6.00	
Lophius vomerinus	57.90	208	5.61	586
Cynoglossus zanzibarensis	32.75	274	3.17	585
Paracallionymus costatus	28.75	2338	2.79	
Holohalaelurus regani	18.87	62	1.83	
Brama brama	17.77	14	1.72	590
Raja wallacei	15.97	6	1.55	
Etrumeus whiteheadi	14.78	176	1.43	
Chelidonichthys capensis	11.98	20	1.16	589
Merluccius capensis	9.58	24	0.93	581
Genypterus capensis	9.18	52	0.89	587
ANTHOZOA (Sea anemones)	8.26	0	0.80	
Raja straeleni	7.39	4	0.72	
Callorhinchus capensis	6.99	4	0.68	
Squalus mitsukurii	4.79	2	0.46	
Caelorinchus simorhynchus	4.69	120	0.45	
Parapagurus pilosimanus	2.68	232	0.26	
Merluccius paradoxus	2.68	335	0.26	583
Todarodes angolensis	2.00	4	0.19	591
URCHINS	1.82	56	0.18	
Squilla sp.	1.62	224	0.16	
Starfish	1.59	0	0.15	
Sepia australis	1.21	80	0.12	
Zeus capensis	1.04	16	0.10	588
Todaropsis eblanae	0.84	40	0.08	593
Congiopodus spinifer	0.80	4	0.08	
Todaropsis eblanae	0.52	16	0.05	592
G A S T R O P O D S	0.40	8	0.04	
Ophichthus bennettai	0.40	2	0.04	
Physiculus capensis	0.15	16	0.01	
Lolliguncula mercatoris	0.08	32	0.01	
Rochinia sp.	0.04	8	0.00	
Total	1032.24		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1360
DATE :29/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°4.73
start stop duration Lon E 16°40.34
TIME :09:41:42 10:12:00 30.3 (min) Purpose : 3
LOG : 4402.01 4403.71 1.7 Region : 6100
FDEPTH: 256 256 Gear cond.: 0
BDEPTH: 256 256 Validity : 0
Towing dir: 0° Wire out : 680 m Speed : 3.4 kn
Sorted : 164 Total catch: 164.12 Catch/hour: 324.99

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	79.21	1097	24.37	595
Lepidopus caudatus	49.51	83	15.24	
Lophius vomerinus	39.60	34	12.19	600
Zeus capensis	29.70	61	9.14	602
Helicolenus dactylopterus	22.77	297	7.01	598
Brama brama	13.86	12	4.27	604
Etrumeus whiteheadi	12.67	141	3.90	
Mustelus palumbes	12.48	4	3.84	
Lampanyctodes hectoris	11.88	0	3.66	
Caelorinchus simorhynchus	8.91	127	2.74	
Merluccius capensis	5.94	6	1.83	594
Merluccius paradoxus	5.94	6	1.83	596
PORIFERA (Sponges)	5.05	4	1.55	
Genypterus capensis	3.96	10	1.22	601
Holohalaelurus regani	3.96	14	1.22	
Paracallionymus costatus	3.17	2113	0.97	
Callorhinchus capensis	2.77	2	0.85	
Maurolicus muelleri	2.18	0	0.67	
Trachurus capensis	1.98	8	0.61	608
Chelidonichthys capensis	1.98	2	0.61	603
Todarodes angolensis	1.88	2	0.58	605
Emmelichthys nitidus	1.69	10	0.52	
Cynoglossus zanzibarensis	1.29	12	0.40	599
Todaropsis eblanae	1.24	16	0.38	607
Todaropsis eblanae	0.70	10	0.22	606
Merluccius paradoxus	0.32	28	0.10	597
Starfish	0.24	0	0.07	
Parapagurus pilosimanus	0.11	10	0.04	
Total	325.00		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1361
DATE :29/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°12.28
start stop duration Lon E 16°27.79
TIME :12:29:45 13:00:44 31.0 (min) Purpose : 3
LOG : 4421.09 4422.66 1.6 Region : 6100
FDEPTH: 319 317 Gear cond.: 0
BDEPTH: 319 317 Validity : 0
Towing dir: 0° Wire out : 910 m Speed : 3.0 kn
Sorted : 294 Total catch: 294.45 Catch/hour: 570.09

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	120.04	1226	21.06	611
Zeus capensis	112.29	290	19.70	617
Caelorinchus simorhynchus	85.19	1419	14.94	
Helicolenus dactylopterus	43.76	399	7.68	612
Lepidopus caudatus	43.76	60	7.68	
Merluccius capensis	38.72	15	6.79	609
Malacocephalus laevis	34.85	304	6.11	
Squalus mitsukurii	15.62	12	2.74	
Holohalaelurus regani	12.78	48	2.24	
Mustelus palumbes	10.84	2	1.90	
Brama brama	9.68	4	1.70	619
PORIFERA (Sponges)	7.65	0	1.34	
Paracallionymus costatus	4.74	379	0.83	
Raja straeleni	3.87	2	0.68	
Raja wallacei	3.87	2	0.68	
Todaropsis eblanae	2.81	43	0.49	623
Cynoglossus zanzibarensis	2.71	25	0.48	614
Merluccius paradoxus	2.52	4	0.44	610
URCHINS	2.32	0	0.41	
Todarodes angolensis	2.23	2	0.39	620
Genypterus capensis	1.94	2	0.34	616
Todaropsis eblanae	1.84	27	0.32	622
Lophius vomerinus	1.74	2	0.31	615
Todarodes angolensis	1.26	2	0.22	621
Rossia enigmatica	0.90	56	0.16	
Chelidonichthys capensis	0.58	2	0.10	618
Epigonus sp.	0.42	8	0.07	
Starfish	0.36	0	0.06	
Emmelichthys nitidus	0.30	4	0.05	
Helicolenus dactylopterus	0.19	143	0.03	613
Ophichthus bennettai	0.13	2	0.02	
Chlorophthalmus sp.	0.11	2	0.02	
Parapagurus pilosimanus	0.03	2	0.01	
Sepia typica	0.02	6	0.00	
Squilla sp.	0.02	4	0.00	
Rochinia sp.	0.01	10	0.00	
Total	570.09		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1362
DATE :29/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°19.67
start stop duration Lon E 16°16.13
TIME :15:39:12 16:09:38 30.4 (min) Purpose : 3
LOG : 4443.43 4445.02 1.6 Region : 6100
FDEPTH: 435 437 Gear cond.: 0
BDEPTH: 435 437 Validity : 0
Towing dir: 0° Wire out : 1220 m Speed : 3.1 kn
Sorted : 627 Total catch: 627.28 Catch/hour: 1237.24

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	723.87	2744	58.51	626
Helicolenus dactylopterus	120.32	420	9.72	627
Merluccius paradoxus	100.59	69	8.13	625
Caelorinchus simorhynchus	76.92	2523	6.22	
Lepidopus caudatus	57.20	63	4.62	
Bassanago albescens	41.42	49	3.35	
Malacocephalus laevis	30.97	34	2.50	
Brama brama	27.61	18	2.23	630
Scyliorhinus capensis	11.83	8	0.96	
Lophius vomerinus	9.86	8	0.80	628
Merluccius capensis	7.89	2	0.64	624
Genypterus capensis	5.92	4	0.48	629
Squalus mitsukurii	3.94	2	0.32	
Octopus magnificus, female	3.16	2	0.26	
Holohalaelurus regani	2.96	6	0.24	
Todarodes angolensis	2.86	4	0.23	632
Todaropsis eblanae	2.17	22	0.18	634
Todarodes angolensis	1.87	4	0.15	631
Rossia enigmatica	1.80	83	0.15	
Epigonus telescopus	1.26	75	0.10	
Lucigadus ori	0.69	85	0.06	
Paracallionymus costatus	0.43	81	0.03	
Todaropsis eblanae	0.39	6	0.03	633
Lampanyctodes hectoris	0.30	0	0.02	
Parapagurus pilosimanus	0.24	14	0.02	
Rochinia sp.	0.17	32	0.01	
Octopus sp.	0.16	2	0.01	
Starfish	0.13	0	0.01	
Stereomastis sp.	0.07	12	0.01	
Physiculus capensis	0.06	2	0.01	
Tripterophycis gilchristi	0.06	4	0.00	
Sepia sp.	0.05	12	0.00	
G A S T R O P O D S	0.03	12	0.00	
Parapagurus dimorphus	0.02	12	0.00	
Hoplostethus mediterraneus	0.02	6	0.00	
Total	1237.24		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1363
DATE :30/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°54.03
start stop duration Lon E 16°25.58
TIME :04:33:12 05:03:12 30.0 (min) Purpose : 3
LOG : 4530.75 4532.48 1.7 Region : 6100
FDEPTH: 277 277 Gear cond.: 0
BDEPTH: 277 277 Validity : 0
Towing dir: 0° Wire out : 760 m Speed : 3.5 kn
Sorted : 250 Total catch: 250.47 Catch/hour: 500.94

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Zeus capensis	138.00	638	27.55	644
Caelorinchus simorhynchus	74.00	1480	14.77	
Helicolenus dactylopterus	70.00	846	13.97	639
Merluccius paradoxus	58.00	908	11.58	636
Lepidopus caudatus	24.00	56	4.79	
Merluccius capensis	18.00	4	3.59	635
Holohalaelurus regani	17.60	92	3.51	
Callorhinchus capensis	16.00	6	3.19	
Malacocephalus laevis	14.00	126	2.79	
Cynoglossus zanzibarensis	12.60	220	2.52	641
Squalus mitsukurii	12.36	20	2.47	
Lophius vomerinus	9.03	10	1.80	642
Chelidonichthys queketti	7.00	54	1.40	645
Emmelichthys nitidus	6.60	114	1.32	
Brama brama	6.00	4	1.20	646
Trachurus capensis	2.40	10	0.48	649
Merluccius paradoxus	2.40	332	0.48	638
Todaropsis eblanae	2.40	34	0.48	648
Paracallionymus costatus	2.00	134	0.40	
Todaropsis eblanae	1.90	26	0.38	647
Etrumeus whiteheadi	1.40	14	0.28	
Genypterus capensis	1.40	4	0.28	643
Congiopodus spinifer	0.76	2	0.15	
Sea pens	0.70	4	0.14	
Starfish	0.60	0	0.12	
Epigonus telescopus	0.51	6	0.10	
Merluccius paradoxus	0.49	2	0.10	637
Helicolenus dactylopterus	0.40	206	0.08	640
Parapagurus dimorphus	0.15	0	0.03	
CORAL	0.07	0	0.01	
Rochinia sp.	0.05	12	0.01	
G A S T R O P O D S	0.04	0	0.01	
Chlorophthalmus sp.	0.03	8	0.01	
Physiculus capensis	0.03	4	0.01	
KRILL *	0.01	24	0.00	
ANTHOZOA (Sea anemones)	0.00	6	0.00	
Total	500.93		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1364
DATE :30/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°0.12
start stop duration Lon E 16°15.38
TIME :10:38:01 11:08:23 30.4 (min) Purpose : 3
LOG : 4561.26 4562.82 1.6 Region : 6100
FDEPTH: 286 286 Gear cond.: 0
BDEPTH: 286 286 Validity : 0
Towing dir: 0° Wire out : 780 m Speed : 3.1 kn
Sorted : 233 Total catch: 233.48 Catch/hour: 461.26

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Zeus capensis	91.87	304	19.92	658
Emmelichthys nitidus	75.07	1501	16.28	
Helicolenus dactylopterus	53.74	620	11.65	654
Squalus mitsukurii	51.37	75	11.14	
Chelidonichthys queketti	45.44	253	9.85	659
Merluccius capensis	31.61	12	6.85	650
Callorhinchus capensis	26.67	8	5.78	
Caelorinchus simorhynchus	23.71	198	5.14	
Lepidopus caudatus	17.78	148	3.85	
Merluccius paradoxus	7.11	69	1.54	651
Lophius vomerinus	6.52	6	1.41	657
Holohalaelurus regani	6.32	24	1.37	
Parapagurus dimorphus	6.03	0	1.31	
Todaropsis eblanae	4.84	67	1.05	660
Todaropsis eblanae	3.36	41	0.73	661
Cynoglossus zanzibarensis	3.26	36	0.71	656
URCHINS	2.86	49	0.62	
Starfish	1.72	4	0.37	
Trachurus capensis	0.79	4	0.17	653
Helicolenus dactylopterus	0.56	340	0.12	655
Paracallionymus costatus	0.30	43	0.06	
Tube corals	0.20	0	0.04	
Sepia sp.	0.06	16	0.01	
Champsodon capensis	0.02	2	0.00	
Squilla sp.	0.02	4	0.00	
ANTHOZOA (Sea anemones)	0.02	24	0.00	
Rochinia sp.	0.01	4	0.00	
Rossia enigmatica	0.01	4	0.00	
Merluccius paradoxus	0.01	2	0.00	652
Total	461.26		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1365
DATE :30/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°3.66
start stop duration Lon E 15°59.22
TIME :13:38:12 14:03:34 25.0 (min) Purpose : 3
LOG : 4580.02 4581.33 1.3 Region : 6100
FDEPTH: 355 343 Gear cond.: 0
BDEPTH: 355 343 Validity : 0
Towing dir: 0° Wire out : 960 m Speed : 3.1 kn
Sorted : 408 Total catch: 408.46 Catch/hour: 980.30

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	254.40	1877	25.95	663
Zeus capensis	220.80	396	22.52	670
Caelorinchus simorhynchus	124.80	2081	12.73	
Merluccius capensis	100.80	24	10.28	662
Helicolenus dactylopterus	74.40	542	7.59	665
Lepidopus caudatus	38.40	127	3.92	
Merluccius paradoxus	33.60	46	3.43	664
Epigonus telescopus	26.40	660	2.69	
Holohalaelurus regani	24.00	67	2.45	
Lophius vomerinus	18.24	14	1.86	668
Squalus mitsukurii	15.36	12	1.57	
Malacocephalus laevis	12.00	34	1.22	
Octopus magnificus, female	12.00	2	1.22	
Brama brama	7.20	5	0.73	671
Genypterus capensis	4.08	2	0.42	669
Todaropsis eblanae	2.16	26	0.22	673
Paracallionymus costatus	1.92	163	0.20	
Todaropsis eblanae	1.92	22	0.20	674
Cyttus traversi	1.66	5	0.17	
Scyliorhinus capensis	1.44	5	0.15	
Todarodes angolensis	1.12	2	0.11	672
Cynoglossus zanzibarensis	0.96	10	0.10	667
Starfish	0.51	0	0.05	
Rossia enigmatica	0.41	22	0.04	
Helicolenus dactylopterus	0.40	223	0.04	666
URCHINS	0.34	5	0.03	
Chlorophthalmus agassizi	0.28	5	0.03	
CORAL	0.24	0	0.02	
Parapagurus pilosimanus	0.24	12	0.02	
Parapagurus dimorphus	0.11	26	0.01	
Champsodon capensis	0.03	2	0.00	
CYPRAEIDAE (Bulia)	0.03	7	0.00	
Sepia sp.	0.03	5	0.00	
Mursia cristimanus	0.01	2	0.00	
Total	980.29		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1366
DATE :30/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 31°12.15
start stop duration Lon E 15°50.85
TIME :18:05:47 18:26:13 20.4 (min) Purpose : 3
LOG : 4599.18 4600.31 1.1 Region : 6100
FDEPTH: 490 490 Gear cond.: 0
BDEPTH: 490 490 Validity : 0
Towing dir: 0° Wire out : 1250 m Speed : 3.3 kn
Sorted : 75 Total catch: 75.48 Catch/hour: 221.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	129.16	332	58.30	675
Lophius vomerinus	42.56	12	19.21	677
Genypterus capensis	14.68	3	6.62	678
Malacocephalus laevis	11.74	23	5.30	
Raja leopardus	5.87	3	2.65	
Caelorinchus simorhynchus	2.42	65	1.09	
Helicolenus dactylopterus	2.35	9	1.06	676
Lycoteuthis lorigera	1.77	44	0.80	
Todarodes angolensis	1.55	3	0.70	680
Cruriraja parcomaculata	1.47	3	0.66	
Photichthys argenteus	1.00	82	0.45	
Epigonus telescopus	0.92	59	0.41	
Starfish	0.90	0	0.40	
Caelorinchus braueri	0.79	76	0.36	
Selachophidium guentheri	0.75	9	0.34	
Todaropsis eblanae	0.65	9	0.30	679
Hoplostethus mediterraneus	0.55	6	0.25	
Rossia enigmatica	0.50	26	0.23	
Paracallionymus costatus	0.41	70	0.19	
Stereomastis sp.	0.26	147	0.12	
Funchalia woodwardi	0.24	38	0.11	
Symbolophorus boops	0.23	18	0.10	
Myxine capensis	0.19	3	0.09	
Lucigadus ori	0.17	29	0.08	
Tripterophycis gilchristi	0.16	12	0.07	
Diaphus sp.	0.15	47	0.07	
Physiculus capensis	0.08	6	0.04	
PARALEPIDIDAE	0.04	3	0.02	
Total	221.56		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1367
DATE :31/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°13.82
start stop duration Lon E 16°56.34
TIME :04:38:56 05:12:16 33.3 (min) Purpose : 3
LOG : 4688.73 4690.61 1.9 Region : 6100
FDEPTH: 153 148 Gear cond.: 0
BDEPTH: 153 148 Validity : 0
Towing dir: 0° Wire out : 450 m Speed : 3.4 kn
Sorted : 29 Total catch: 28.89 Catch/hour: 51.99

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	14.40	407	27.69	682
Sepia australis	11.88	0	22.84	
Merluccius capensis	7.74	56	14.88	681
Callorhinchus capensis	5.58	4	10.73	
Lampanyctodes hectoris	5.40	1800	10.38	
Helicolenus dactylopterus	2.34	196	4.50	685
Lepidopus caudatus	1.26	101	2.42	
Todaropsis eblanae	1.08	50	2.08	689
Genypterus capensis	0.90	16	1.73	687
Cynoglossus zanzibarensis	0.54	16	1.04	686
Todarodes angolensis	0.36	2	0.69	688
Paracallionymus costatus	0.19	61	0.36	
Congiopodus spinifer	0.17	4	0.32	
Trachurus capensis	0.14	2	0.26	684
Merluccius paradoxus	0.04	7	0.07	683
Total	51.99		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1368
DATE :31/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°16.02
start stop duration Lon E 16°44.50
TIME :07:05:11 07:34:54 29.7 (min) Purpose : 3
LOG : 4704.40 4706.12 1.7 Region : 6100
FDEPTH: 189 187 Gear cond.: 0
BDEPTH: 189 187 Validity : 0
Towing dir: 0° Wire out : 560 m Speed : 3.5 kn
Sorted : 249 Total catch: 359.88 Catch/hour: 726.54

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
PORIFERA (Sponges)	296.77	0	40.85	
Merluccius paradoxus	244.28	5182	33.62	692
Merluccius capensis	66.62	275	9.17	690
Sepia australis	30.28	2019	4.17	
Helicolenus dactylopterus	19.48	2453	2.68	694
Merluccius paradoxus	17.44	1908	2.40	693
Lampanyctodes hectoris	11.63	0	1.60	
Callorhinchus capensis	6.06	2	0.83	
Holohalaelurus regani	5.21	133	0.72	
Todaropsis eblanae	5.21	133	0.72	701
Lophius vomerinus	5.05	32	0.69	696
Raja straeleni	5.05	2	0.69	
Merluccius capensis	3.63	24	0.50	691
URCHINS	2.40	46	0.33	
Todaropsis eblanae	1.75	52	0.24	700
Todarodes angolensis	1.31	4	0.18	698
Caelorinchus simorhynchus	1.19	81	0.16	
Todarodes angolensis	0.91	4	0.13	699
Genypterus capensis	0.71	4	0.10	697
Maurolicus muelleri	0.59	0	0.08	
Macropipus australis	0.39	18	0.05	
Paracallionymus costatus	0.29	81	0.04	
Cynoglossus zanzibarensis	0.17	6	0.02	695
Exodromidia sp.	0.14	28	0.02	
Squilla sp.	0.07	6	0.01	
Tripterophycis gilchristi	0.05	6	0.01	
Lolligoncula mercatoris	0.04	18	0.01	
Total	726.73		100.03	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1369
DATE :31/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°24.58
start stop duration Lon E 16°33.55
TIME :09:53:20 10:26:55 33.6 (min) Purpose : 3
LOG : 4722.86 4724.66 1.8 Region : 6100
FDEPTH: 216 218 Gear cond.: 0
BDEPTH: 216 218 Validity : 0
Towing dir: 0° Wire out : 560 m Speed : 3.2 kn
Sorted : 130 Total catch: 603.30 Catch/hour: 1078.28

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	890.08	13258	82.55	704
Merluccius capensis	37.53	114	3.48	702
Etrumeus whiteheadi	30.03	429	2.78	
Helicolenus dactylopterus	26.27	1137	2.44	706
Cynoglossus zanzibarensis	13.94	236	1.29	707
Merluccius paradoxus	13.94	43	1.29	703
Sepia australis	12.87	590	1.19	
Paracallionymus costatus	9.65	794	0.90	
Raja wallacei	5.72	4	0.53	
URCHINS	5.45	134	0.51	
Lophius vomerinus	5.36	18	0.50	708
Callorhinchus capensis	5.36	2	0.50	
Raja straeleni	3.57	4	0.33	
Chelidonichthys capensis	3.57	9	0.33	710
Brama brama	2.68	2	0.25	711
Todaropsis eblanae	2.68	97	0.25	712
Merluccius paradoxus	2.36	97	0.22	705
ANTHOZOA (Sea anemones)	2.14	7	0.20	
Caelorinchus simorhynchus	1.39	107	0.13	
Todarodes angolensis	1.07	2	0.10	713
Genypterus capensis	0.71	4	0.07	709
Holohalaelurus regani	0.47	11	0.04	
Squilla sp.	0.45	64	0.04	
Lepidopus caudatus	0.45	11	0.04	
Rossia enigmatica	0.27	11	0.02	
Starfish	0.20	21	0.02	
Congiopodus spinifer	0.03	2	0.00	
Total	1078.28		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1370
DATE :31/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°32.88
start stop duration Lon E 16°18.12
TIME :13:46:13 14:08:13 22.0 (min) Purpose : 3
LOG : 4745.77 4746.85 1.1 Region : 6100
FDEPTH: 249 245 Gear cond.: 0
BDEPTH: 249 245 Validity : 0
Towing dir: 0° Wire out : 700 m Speed : 3.0 kn
Sorted : 212 Total catch: 260.32 Catch/hour: 709.95

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	132.27	2250	18.63	716
Helicolenus dactylopterus	118.64	1893	16.71	719
Lampanyctodes hectoris	102.27	0	14.41	
Brama brama	70.91	38	9.99	725
Lepidopus caudatus	35.45	33	4.99	
Trachurus capensis	27.27	95	3.84	718
Lophius vomerinus	27.27	27	3.84	721
Merluccius capensis	26.18	19	3.69	714
Zeus capensis	25.09	90	3.53	723
Caelorinchus simorhynchus	23.18	308	3.27	
Maurolicus muelleri	23.18	0	3.27	
Holohalaelurus regani	14.05	74	1.98	
Cynoglossus zanzibarensis	11.55	226	1.63	720
Merluccius paradoxus	10.91	27	1.54	715
Etrumeus whiteheadi	9.17	101	1.29	
Thyrsites atun	8.73	5	1.23	722
Todarodes angolensis	6.68	5	0.94	726
URCHINS	6.44	123	0.91	
PORIFERA (Sponges)	6.07	0	0.85	
Squalus mitsukurii	4.36	3	0.61	
Chelidonichthys queketti	4.09	33	0.58	724
Rossia enigmatica	3.49	134	0.49	
Merluccius paradoxus	2.83	330	0.40	717
Paracallionymus costatus	1.39	106	0.20	
CORAL	1.39	0	0.20	
Emmelichthys nitidus	1.23	8	0.17	
Todaropsis eblanae	1.19	33	0.17	727
Starfish	1.15	0	0.16	
Sea pens	1.09	5	0.15	
G A S T R O P O D S	1.06	27	0.15	
Malacocephalus laevis	0.55	5	0.08	
Genypterus capensis	0.55	3	0.08	728
ANTHOZOA (Sea anemones)	0.41	14	0.06	
Squilla sp.	0.12	38	0.02	
Mursia cristimanus	0.04	5	0.01	
Sepia australis	0.03	27	0.00	
Inioteuthis capensis	0.02	5	0.00	
Sepia sp.	0.01	3	0.00	
Exodromidia sp.	0.01	5	0.00	
Total	710.30		100.05	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1371
DATE :31/01/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°40.73
start stop duration Lon E 16°5.49
TIME :17:42:18 18:12:03 29.8 (min) Purpose : 3
LOG : 4780.20 4781.87 1.7 Region : 6100
FDEPTH: 228 228 Gear cond.: 0
BDEPTH: 228 228 Validity : 0
Towing dir: 0° Wire out : 620 m Speed : 3.4 kn
Sorted : 306 Total catch: 453.49 Catch/hour: 914.60

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Emmelichthys nitidus	198.66	3973	21.72	
Zeus capensis	161.34	617	17.64	735
Merluccius capensis	141.18	63	15.44	729
Squalus megalops	106.89	210	11.69	
Lepidopus caudatus	80.67	81	8.82	
Chelidonichthys queketti	75.17	397	8.22	736
Lophius vomerinus	36.30	22	3.97	733
Thyrsites atun	32.27	40	3.53	734
Callorhinchus capensis	26.82	10	2.93	
Arnoglossus capensis	16.13	1291	1.76	
Cynoglossus zanzibarensis	8.07	81	0.88	732
Congiopodus torvus	6.05	2	0.66	
Trachurus capensis	4.84	16	0.53	730
Raja straeleni	3.03	2	0.33	
Raja wallacei	3.03	2	0.33	
Parapagurus dimorphus	2.64	837	0.29	
Starfish	2.19	0	0.24	
Paracallionymus costatus	2.12	236	0.23	
Todarodes angolensis	1.70	6	0.19	738
Helicolenus dactylopterus	1.36	54	0.15	731
URCHINS	0.91	16	0.10	
Etrumeus whiteheadi	0.84	10	0.09	
Todaropsis eblanae	0.77	16	0.08	737
Scyliorhinus capensis	0.70	16	0.08	
Congiopodus spinifer	0.56	6	0.06	
G A S T R O P O D S	0.20	10	0.02	
Sepia australis	0.09	10	0.01	
Mursia cristimanus	0.02	6	0.00	
Exodromidia sp.	0.02	6	0.00	
Inioteuthis capensis	0.01	6	0.00	
Total	914.59		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1372
DATE :01/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°54.04
start stop duration Lon E 16°39.92
TIME :04:21:28 04:51:18 29.8 (min) Purpose : 3
LOG : 4851.51 4853.23 1.7 Region : 6100
FDEPTH: 159 159 Gear cond.: 0
BDEPTH: 159 159 Validity : 0
Towing dir: 0° Wire out : 500 m Speed : 3.5 kn
Sorted : 128 Total catch: 128.10 Catch/hour: 257.74

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
J E L L Y F I S H	158.95	0	61.67	
Sepia australis	23.34	1262	9.06	
Lepidopus caudatus	21.33	853	8.28	
Maurolicus muelleri	20.12	0	7.81	
Callorhinchus capensis	9.05	4	3.51	
Merluccius paradoxus	8.85	284	3.43	741
Merluccius capensis	7.04	38	2.73	739
Helicolenus dactylopterus	7.04	402	2.73	740
Todaropsis eblanae	0.71	34	0.27	743
Sepia hieronis	0.43	10	0.17	
Paracallionymus costatus	0.37	80	0.14	
Squilla sp.	0.19	30	0.07	
Cynoglossus zanzibarensis	0.07	2	0.03	742
Aristaeomorpha foliacea	0.06	6	0.02	
Holohalaelurus regani	0.05	2	0.02	
Sea pens	0.05	38	0.02	
Starfish	0.03	24	0.01	
Lolligoncula mercatoris	0.02	6	0.01	
Lampanyctodes hectoris	0.02	4	0.01	
G A S T R O P O D S	0.01	6	0.00	
Exodromidia sp.	0.01	8	0.00	
Total	257.74		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1373
DATE :01/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°59.94
start stop duration Lon E 16°30.17
TIME :06:36:28 07:06:56 29.6 (min) Purpose : 3
LOG : 4867.66 4869.45 1.8 Region : 6100
FDEPTH: 180 179 Gear cond.: 0
BDEPTH: 180 179 Validity : 0
Towing dir: 0° Wire out : 550 m Speed : 3.6 kn
Sorted : 65 Total catch: 389.26 Catch/hour: 790.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	316.75	3600	40.08	745
Helicolenus dactylopterus	134.01	12891	16.96	746
Merluccius capensis	121.83	524	15.41	744
Sepia australis	99.90	6660	12.64	
Etrumeus whiteheadi	56.04	863	7.09	
J E L L Y F I S H	17.06	0	2.16	
Lophius vomerinus	12.18	134	1.54	747
Lampanyctodes hectoris	8.53	0	1.08	
Paracallionymus costatus	7.92	609	1.00	
Todaropsis eblanae	4.87	171	0.62	748
Cynoglossus zanzibarensis	3.65	73	0.46	750
Maurolicus muelleri	3.65	0	0.46	
Merluccius paradoxus	1.22	183	0.15	749
Sepia hieronis	0.80	24	0.10	
Congiopodus spinifer	0.61	12	0.08	
Todarodes angolensis	0.56	2	0.07	752
Zeus capensis	0.45	12	0.06	751
Starfish	0.44	0	0.06	
Holohalaelurus regani	0.33	12	0.04	
Lolligoncula mercatoris	0.04	0	0.00	
Total	790.85		100.06	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1374
DATE :01/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°8.28
start stop duration Lon E 16°20.66
TIME :09:10:01 09:40:20 30.3 (min) Purpose : 3
LOG : 4885.26 4887.00 1.7 Region : 6100
FDEPTH: 190 189 Gear cond.: 0
BDEPTH: 190 189 Validity : 0
Towing dir: 0° Wire out : 570 m Speed : 3.4 kn
Sorted : 234 Total catch: 327.85 Catch/hour: 649.20

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	247.52	3537	38.13	
Merluccius capensis	140.59	457	21.66	754
Merluccius paradoxus	53.47	794	8.24	755
Chelidonichthys capensis	39.60	99	6.10	760
Merluccius capensis	31.68	20	4.88	753
Helicolenus dactylopterus	28.71	525	4.42	762
Callorhinchus capensis	18.81	6	2.90	
Sepia australis	12.08	966	1.86	
Genypterus capensis	11.88	46	1.83	758
J E L L Y F I S H	10.50	0	1.62	
Paracallionymus costatus	8.42	842	1.30	
Lophius vomerinus	7.92	10	1.22	756
Zeus capensis	7.92	174	1.22	765
Lepidopus caudatus	7.13	4	1.10	
Raja straeleni	5.15	2	0.79	
Todaropsis eblanae	3.66	131	0.56	768
Chelidonichthys queketti	3.37	26	0.52	759
Cynoglossus zanzibarensis	2.08	42	0.32	764
Thyrsites atun	1.78	2	0.27	757
Merluccius paradoxus	1.57	89	0.24	763
Todarodes angolensis	1.09	2	0.17	761
Lepidopus caudatus	1.06	16	0.16	0
Todaropsis eblanae	0.74	10	0.11	767
Congiopodus spinifer	0.59	4	0.09	
Holohalaelurus regani	0.40	2	0.06	
URCHINS	0.30	12	0.05	
Sebastes capensis	0.30	2	0.05	
Helicolenus dactylopterus	0.29	95	0.04	766
Mustelus palumbes	0.20	2	0.03	
Starfish	0.20	0	0.03	
Parapagurus dimorphus	0.16	14	0.02	
Lolligoncula mercatoris	0.03	16	0.00	
Caelorinchus simorhynchus	0.02	6	0.00	
Total	649.20		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1376
DATE :01/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°15.63
start stop duration Lon E 16°5.99
TIME :13:35:22 14:06:01 30.7 (min) Purpose : 3
LOG : 4914.21 4915.73 1.5 Region : 6100
FDEPTH: 219 216 Gear cond.: 0
BDEPTH: 219 216 Validity : 0
Towing dir: 0° Wire out : 620 m Speed : 3.0 kn
Sorted : 284 Total catch: 993.48 Catch/hour: 1944.83

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1469.36	21490	75.55	773
Brama brama	86.13	39	4.43	769
Merluccius capensis	84.83	254	4.36	776
Lophius vomerinus	54.81	67	2.82	772
Sepia australis	39.15	2609	2.01	
Helicolenus dactylopterus	31.69	1225	1.63	777
Lampanyctodes hectoris	22.20	0	1.14	
Etrumeus whiteheadi	16.95	180	0.87	
Paracallionymus costatus	16.91	1691	0.87	
Raja pullopunctata	15.66	2	0.81	
Caelorinchus simorhynchus	15.33	327	0.79	
Merluccius paradoxus	14.81	1417	0.76	779
Cynoglossus zanzibarensis	14.78	348	0.76	778
Genypterus capensis	11.75	45	0.60	771
Merluccius capensis	9.79	8	0.50	774
Chelidonichthys capensis	7.83	10	0.40	770
Holohalaelurus regani	5.38	22	0.28	
Todaropsis eblanae	5.26	168	0.27	786
Todarodes angolensis	3.13	4	0.16	775
Callorhinchus capensis	2.94	2	0.15	
Todarodes angolensis	2.94	10	0.15	782
Todarodes angolensis	2.94	10	0.15	783
URCHINS	2.54	31	0.13	
Chelidonichthys queketti	1.59	10	0.08	780
Maurolicus muelleri	1.06	0	0.05	
Todaropsis eblanae	1.04	31	0.05	785
Zeus capensis	0.98	10	0.05	784
Squilla sp.	0.80	127	0.04	
Congiopodus spinifer	0.78	16	0.04	
Starfish	0.64	72	0.03	
Parapagurus dimorphus	0.39	25	0.02	
Rossia enigmatica	0.13	10	0.01	
ANTHOZOA (Sea anemones)	0.11	18	0.01	
Helicolenus dactylopterus	0.06	43	0.00	781
Exodromidia sp.	0.06	23	0.00	
Mursia cristimanus	0.03	12	0.00	
Lycoteuthis lorigera	0.03	10	0.00	
G A S T R O P O D S	0.01	2	0.00	
Total	1944.83		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1377
DATE :01/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°22.97
start stop duration Lon E 15°51.83
TIME :16:33:51 17:03:13 29.4 (min) Purpose : 3
LOG : 4935.10 4936.72 1.6 Region : 6100
FDEPTH: 251 236 Gear cond.: 0
BDEPTH: 251 236 Validity : 0
Towing dir: 0° Wire out : 700 m Speed : 3.3 kn
Sorted : 214 Total catch: 969.97 Catch/hour: 1981.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1716.04	19683	86.60	795
Maurolicus muelleri	39.22	0	1.98	
J E L L Y F I S H	36.77	0	1.86	
Lophius vomerinus	30.64	25	1.55	792
Merluccius capensis	28.60	22	1.44	788
Brama brama	19.41	10	0.98	787
PORIFERA (Sponges)	13.59	0	0.69	
Maurolicus muelleri	13.28	0	0.67	0
Helicolenus dactylopterus	11.64	319	0.59	798
Trachurus capensis	9.81	74	0.49	800
Caelorinchus simorhynchus	9.81	257	0.49	
Merluccius paradoxus	8.99	18	0.45	793
Congiopodus torvus	6.74	2	0.34	
Zeus capensis	6.13	14	0.31	797
Todarodes angolensis	4.29	8	0.22	790
Holohalaelurus regani	3.97	25	0.20	
Callorhinchus capensis	3.27	2	0.16	
Cynoglossus zanzibarensis	3.06	49	0.15	799
Todarodes angolensis	2.86	6	0.14	789
Thyrsites atun	2.45	2	0.12	791
Todaropsis eblanae	2.02	74	0.10	801
Zeus capensis	1.72	25	0.09	794
Starfish	1.55	0	0.08	
Sepia australis	1.37	123	0.07	
Genypterus capensis	1.23	4	0.06	796
Lepidopus caudatus	1.04	12	0.05	
Rossia enigmatica	1.01	37	0.05	
Paracallionymus costatus	0.60	86	0.03	
G A S T R O P O D S	0.22	25	0.01	
Squilla sp.	0.14	31	0.01	
Sepia sp.	0.05	12	0.00	
Lolliguncula mercatoris	0.04	12	0.00	
P O L Y C H A E T A	0.01	2	0.00	
Total	1981.56		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1379
DATE :02/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°36.67
start stop duration Lon E 16°35.79
TIME :04:21:48 04:51:04 29.3 (min) Purpose : 3
LOG : 5018.33 5020.09 1.8 Region : 6100
FDEPTH: 152 150 Gear cond.: 0
BDEPTH: 152 150 Validity : 0
Towing dir: 0° Wire out : 480 m Speed : 3.6 kn
Sorted : 212 Total catch: 211.60 Catch/hour: 433.75

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	332.08	0	76.56	
Merluccius capensis	38.95	314	8.98	803
Sepia australis	25.21	1441	5.81	
Merluccius paradoxus	12.71	822	2.93	804
Squilla sp.	5.43	0	1.25	
Callorhinchus capensis	3.07	2	0.71	
Todarodes angolensis	2.87	12	0.66	808
Helicolenus dactylopterus	2.05	152	0.47	806
Lepidopus caudatus	1.84	74	0.43	
Todarodes angolensis	1.64	6	0.38	809
PORIFERA (Sponges)	1.22	0	0.28	
Lampanyctodes hectoris	1.02	0	0.24	
Genypterus capensis	1.02	8	0.24	807
Maurolicus muelleri	1.02	0	0.24	
Todaropsis eblanae	0.92	27	0.21	811
Cynoglossus zanzibarensis	0.61	12	0.14	812
Todaropsis eblanae	0.51	14	0.12	810
Jasus lalandii	0.49	4	0.11	814
Lolliguncula mercatoris	0.41	170	0.09	
Paracallionymus costatus	0.33	33	0.08	
Jasus lalandii	0.21	2	0.05	815
Macropipus australis	0.07	2	0.02	
Zeus capensis	0.03	2	0.01	813
Physiculus capensis	0.01	2	0.00	
Total	433.75		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1381
DATE :02/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°41.26
start stop duration Lon E 16°20.74
TIME :08:24:05 08:53:59 29.9 (min) Purpose : 3
LOG : 5044.01 5045.83 1.8 Region : 6100
FDEPTH: 168 166 Gear cond.: 0
BDEPTH: 168 166 Validity : 0
Towing dir: 0° Wire out : 500 m Speed : 3.7 kn
Sorted : 152 Total catch: 293.83 Catch/hour: 589.43

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	174.12	4048	29.54	818
Merluccius capensis	149.16	925	25.31	817
J E L L Y F I S H	86.26	0	14.63	
Sepia australis	79.64	3539	13.51	
PORIFERA (Sponges)	22.07	0	3.74	
J E L L Y F I S H	20.06	0	3.40	0
PORIFERA (Sponges)	19.76	0	3.35	0
Helicolenus dactylopterus	10.44	1103	1.77	821
Brama brama	8.63	4	1.46	816
Lepidopus caudatus	3.97	293	0.67	
Todarodes angolensis	3.01	8	0.51	820
Lampanyctodes hectoris	2.98	0	0.51	
Maurolicus muelleri	2.98	0	0.51	
Todarodes angolensis	1.40	6	0.24	819
Todaropsis eblanae	1.28	54	0.22	827
Genypterus capensis	1.09	10	0.18	824
Merluccius paradoxus	0.75	60	0.13	822
Lophius vomerinus	0.64	4	0.11	823
Paracallionymus costatus	0.50	80	0.09	
Lolliguncula mercatoris	0.16	74	0.03	
URCHINS	0.15	4	0.03	0
Cynoglossus zanzibarensis	0.10	4	0.02	826
Zeus capensis	0.09	4	0.02	825
Macropipus australis	0.08	2	0.01	
Holohalaelurus regani	0.06	4	0.01	
Caelorinchus simorhynchus	0.05	4	0.01	
Exodromidia sp.	0.02	2	0.00	
Total	589.44		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1382
DATE :02/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°48.50
start stop duration Lon E 16°9.51
TIME :11:07:29 11:38:17 30.8 (min) Purpose : 3
LOG : 5062.99 5064.58 1.6 Region : 6100
FDEPTH: 185 185 Gear cond.: 0
BDEPTH: 185 185 Validity : 0
Towing dir: 0° Wire out : 550 m Speed : 3.1 kn
Sorted : 131 Total catch: 494.35 Catch/hour: 963.02

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	323.38	5462	33.58	836
Merluccius capensis	191.94	707	19.93	835
Helicolenus dactylopterus	83.96	7405	8.72	833
Lophius vomerinus	66.82	0	6.94	
Sepia australis	58.64	3351	6.09	
Trachurus capensis	50.62	618	5.26	840
Merluccius paradoxus	32.86	2760	3.41	834
Etrumeus whiteheadi	25.27	374	2.62	
Paracallionymus costatus	20.26	1350	2.10	
URCHINS	18.31	154	1.90	
Brama brama	15.58	8	1.62	830
Merluccius capensis	13.64	16	1.42	831
Callorhinchus capensis	11.30	4	1.17	
Chelidonichthys capensis	9.74	21	1.01	832
Raja straeleni	6.82	4	0.71	
Holohalaelurus regani	5.06	51	0.53	
Todaropsis eblanae	5.04	232	0.52	839
Cynoglossus zanzibarensis	4.04	111	0.42	841
Raja wallacei	3.90	2	0.40	
Mustelus palumbes	3.70	2	0.38	
Todaropsis eblanae	3.51	70	0.36	838
Thyrsites atun	3.31	2	0.34	828
Caelorinchus simorhynchus	2.03	51	0.21	
Lepidopus caudatus	0.97	19	0.10	
Zeus capensis	0.97	10	0.10	842
Sepia hieronis	0.49	19	0.05	
PORIFERA (Sponges)	0.24	0	0.02	
Congiopodus spinifer	0.19	2	0.02	
Jasus lalandii	0.19	2	0.02	829
Macropipus australis	0.08	2	0.01	
Starfish	0.08	0	0.01	
Squilla sp.	0.04	2	0.00	
Parapagurus dimorphus	0.03	2	0.00	
Total	963.02		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1383
DATE :02/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°57.21
start stop duration Lon E 15°54.27
TIME :14:13:04 14:43:16 30.2 (min) Purpose : 3
LOG : 5084.31 5085.90 1.6 Region : 6100
FDEPTH: 201 204 Gear cond.: 0
BDEPTH: 201 204 Validity : 0
Towing dir: 0° Wire out : 580 m Speed : 3.2 kn
Sorted : 178 Total catch: 177.98 Catch/hour: 353.72

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Etrumeus whiteheadi	98.58	1405	27.87	
Merluccius paradoxus	77.51	1628	21.91	851
Helicolenus dactylopterus	24.84	612	7.02	845
Merluccius capensis	22.86	32	6.46	846
Lophius vomerinus	18.28	22	5.17	844
Merluccius paradoxus	17.89	1316	5.06	852
Caelorinchus simorhynchus	12.72	231	3.60	
Trachurus capensis	10.73	70	3.03	850
Lepidopus caudatus	8.35	105	2.36	
Todaropsis eblanae	7.75	95	2.19	858
Holohalaelurus regani	7.45	52	2.11	
Brama brama	7.15	4	2.02	843
Sepia australis	5.96	1192	1.69	
Chelidonichthys capensis	4.57	0	1.29	
Todaropsis eblanae	4.17	60	1.18	857
Genypterus capensis	3.88	20	1.10	847
Cynoglossus zanzibarensis	3.38	68	0.96	849
Raja straeleni	3.38	2	0.96	
Callorhinchus capensis	3.38	2	0.96	
Paracallionymus costatus	2.58	344	0.73	
URCHINS	2.38	42	0.67	
Todaropsis eblanae	1.39	68	0.39	856
Emmelichthys nitidus	0.99	2	0.28	
Starfish	0.72	0	0.20	
Zeus capensis	0.70	8	0.20	854
Todarodes angolensis	0.60	2	0.17	855
Chelidonichthys queketti	0.60	4	0.17	853
Lolligoncula mercatoris	0.43	185	0.12	
Rossia enigmatica	0.29	20	0.08	
Sebastes capensis	0.09	2	0.03	
Helicolenus dactylopterus	0.06	44	0.02	848
Squilla sp.	0.04	6	0.01	
Champsodon capensis	0.02	2	0.01	
ANTHOZOA (Sea anemones)	0.01	4	0.00	
Total	353.71		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1384
DATE :02/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°3.12
start stop duration Lon E 15°41.73
TIME :16:40:14 17:10:32 30.3 (min) Purpose : 3
LOG : 5100.47 5102.23 1.8 Region : 6100
FDEPTH: 217 219 Gear cond.: 0
BDEPTH: 217 219 Validity : 0
Towing dir: 0° Wire out : 600 m Speed : 3.5 kn
Sorted : 203 Total catch: 364.99 Catch/hour: 722.75

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Lepidopus caudatus	151.88	2170	21.01	
Etrumeus whiteheadi	125.35	1493	17.34	
Merluccius paradoxus	121.98	2182	16.88	866
Lophius vomerinus	97.82	67	13.53	859
Trachurus capensis	32.54	125	4.50	870
Merluccius capensis	29.70	26	4.11	864
Holohalaelurus regani	26.14	115	3.62	
Thyrsites atun	23.76	16	3.29	860
Merluccius paradoxus	15.19	3020	2.10	871
Paracallionymus costatus	13.47	1796	1.86	
Cynoglossus zanzibarensis	13.05	299	1.81	872
Chelidonichthys capensis	10.89	18	1.51	861
Sepia australis	10.30	824	1.42	
Callorhinchus capensis	7.92	4	1.10	
Helicolenus dactylopterus	7.05	412	0.97	874
Squalus mitsukurii	6.04	4	0.84	
Emmelichthys nitidus	5.94	10	0.82	
Caelorinchus simorhynchus	4.40	71	0.61	
Genypterus capensis	3.17	4	0.44	863
Malacocephalus laevis	2.72	22	0.38	
Todarodes angolensis	2.18	4	0.30	868
Todaropsis eblanae	2.16	97	0.30	873
Todarodes angolensis	1.98	2	0.27	867
Zeus capensis	1.66	28	0.23	869
Chelidonichthys queketti	1.39	8	0.19	862
Helicolenus dactylopterus	1.09	689	0.15	875
Merluccius paradoxus	0.99	2	0.14	865
URCHINS	0.65	6	0.09	
Rossia enigmatica	0.52	22	0.07	
ANTHOZOA (Sea anemones)	0.30	6	0.04	
Squilla sp.	0.29	50	0.04	
Lolligoncula mercatoris	0.19	81	0.03	
Champsodon capensis	0.06	6	0.01	
Total	722.75		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1385
DATE :03/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°20.44
start stop duration Lon E 15°7.31
TIME :04:34:30 05:05:05 30.6 (min) Purpose : 3
LOG : 5194.30 5196.09 1.8 Region : 6100
FDEPTH: 412 411 Gear cond.: 0
BDEPTH: 412 411 Validity : 0
Towing dir: 0° Wire out : 1150 m Speed : 3.5 kn
Sorted : 205 Total catch: 205.22 Catch/hour: 402.79

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	210.01	744	52.14	917
Merluccius paradoxus	52.99	33	13.16	916
Lepidopus caudatus	37.29	51	9.26	
Beryx splendens	30.42	143	7.55	920
Helicolenus dactylopterus	24.53	110	6.09	919
Genypterus capensis	10.99	4	2.73	918
Malacocephalus laevis	7.78	18	1.93	
Bassanago albescens	6.28	8	1.56	
Caelorinchus simorhynchus	5.69	228	1.41	
Emmelichthys nitidus	4.12	8	1.02	
Epigonus sp.	3.14	126	0.78	
Todarodes angolensis	2.16	4	0.54	922
Hydrolagus sp.	1.96	2	0.49	
Lampanyctodes hectoris	1.37	0	0.34	
Todarodes angolensis	1.18	2	0.29	921
Maurolicus muelleri	0.98	0	0.24	
Cyttus traversi	0.61	2	0.15	
Rossia enigmatica	0.29	14	0.07	
Hoplostethus mediterraneus	0.29	6	0.07	
Holohalaelurus regani	0.29	2	0.07	
Lucigadus ori	0.13	24	0.03	
Symbolophorus boops	0.10	6	0.02	
Tripterophycis gilchristi	0.08	4	0.02	
S H R I M P S	0.04	14	0.01	
Lophius vomerinus	0.02	2	0.00	923
Physiculus capensis	0.02	2	0.00	
Stereomastis sp.	0.01	4	0.00	
Parapagurus pilosimanus	0.01	4	0.00	
Total	402.79		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1386
DATE :03/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°24.00
start stop duration Lon E 14°59.55
TIME :06:55:38 07:25:43 30.1 (min) Purpose : 3
LOG : 5207.13 5208.89 1.8 Region : 6100
FDEPTH: 535 539 Gear cond.: 0
BDEPTH: 535 539 Validity : 0
Towing dir: 0° Wire out : 1400 m Speed : 3.5 kn
Sorted : 113 Total catch: 113.10 Catch/hour: 225.67

SPECIES	CATCH/HOUR weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	81.81	82	36.25	876
Helicolenus dactylopterus	60.86	267	26.97	878
Lophius vomerinus	21.95	6	9.73	877
Etmopterus brachyurus	17.56	295	7.78	
Photichthys argenteus	9.18	305	4.07	
Notacanthus sexspinis	7.98	122	3.54	
Todarodes angolensis	7.18	12	3.18	880
Neoscopelus macrolepidotus	3.99	134	1.77	
Caelorinchus braueri	3.29	164	1.46	
Selachophidium guentheri	2.39	36	1.06	
Todarodes angolensis	2.19	4	0.97	879
Deania profundorum	1.60	2	0.71	
Malacocephalus laevis	1.10	2	0.49	
Hydrolagus sp.	1.10	2	0.49	
Caelorinchus matamua	0.60	4	0.27	
Oreosoma atlanticum	0.56	4	0.25	
Photonectes braueri	0.42	8	0.19	
Nezumia sp.	0.40	32	0.18	
Beryx splendens	0.36	2	0.16	
Myxine capensis	0.23	4	0.10	
Lucigadus ori	0.20	32	0.09	
Bassanago albescens	0.16	2	0.07	
Lycoteuthis lorigera	0.15	14	0.07	
Gymnoscopelus sp.	0.12	18	0.05	
Rossia enigmatica	0.08	4	0.03	
Physiculus capensis	0.07	6	0.03	
Xenodermichthys copei	0.07	4	0.03	
PARALEPIDIDAE	0.03	2	0.01	
Epigonus sp.	0.02	2	0.01	
Chauliodus sloani	0.01	2	0.00	
Total	225.66		99.99	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1387
DATE :03/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°18.67
start stop duration Lon E 14°47.73
TIME :09:10:45 09:40:10 29.4 (min) Purpose : 3
LOG : 5219.80 5221.49 1.7 Region : 6100
FDEPTH: 639 638 Gear cond.: 0
BDEPTH: 639 638 Validity : 0
Towing dir: 0° Wire out : 1670 m Speed : 3.4 kn
Sorted : 187 Total catch: 187.08 Catch/hour: 381.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Notacanthus sexspinis	114.29	1429	29.93	
Caelorinchus braueri	55.10	551	14.43	
Ruvettus pretiosus	45.92	2	12.03	
Photichthys argenteus	32.65	727	8.55	
Funchalia woodwardi	27.76	0	7.27	
Merluccius paradoxus	26.53	20	6.95	881
Centrophorus squamosus	13.67	2	3.58	
Etmopterus brachyurus	10.82	286	2.83	
Caridae white	7.14	0	1.87	
Genypterus capensis	6.94	71	1.82	
Caelorinchus matamua	5.71	45	1.50	
Trachyscorpia eschmeyeri	5.10	57	1.34	
Gymnoscopelus sp.	4.08	545	1.07	
Raja confundens	3.88	12	1.02	
Todarodes angolensis	3.47	6	0.91	882
Photonectes braueri	3.22	57	0.84	
Neoscopelus sp.	2.86	124	0.75	
Malacocephalus laevis	2.45	6	0.64	
Todarodes angolensis	2.35	6	0.61	883
Nezumia sp.	2.04	84	0.53	
Psychrolutes macrocephalus	1.33	10	0.35	
Hydrolagus sp.	0.71	4	0.19	
Myxine capensis	0.48	6	0.12	
Plesionika martia	0.43	0	0.11	
Neocyttus rhomboidalis	0.42	4	0.11	
Sergia sp.	0.40	0	0.10	
Sea cucumber	0.32	2	0.08	
Lycoteuthis lorigera	0.27	22	0.07	
Hoplostethus cadenati	0.24	8	0.06	
Yarrella blackfordi	0.23	16	0.06	
Starfish	0.21	0	0.06	
GEMPYLIDAE	0.21	2	0.05	
Aristeus varidens	0.13	6	0.03	
Raja leopardus	0.12	4	0.03	
Argentina sp.	0.08	4	0.02	
Symbolophorus boops	0.07	8	0.02	
Scopelosaurus herwigi	0.07	2	0.02	
PARALEPIDIDAE	0.04	6	0.01	
Cranchia scabra	0.04	2	0.01	
Howella sherborni	0.03	2	0.01	
Spirula spirula	0.02	2	0.00	
Lepidion capensis	0.00	0	0.00	
Total	381.81		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1388
DATE :03/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 30°6.29
start stop duration Lon E 14°46.73
TIME :11:56:16 12:26:25 30.1 (min) Purpose : 3
LOG : 5236.69 5238.26 1.6 Region : 6100
FDEPTH: 504 509 Gear cond.: 0
BDEPTH: 504 509 Validity : 0
Towing dir: 0° Wire out : 1400 m Speed : 3.1 kn
Sorted : 405 Total catch: 405.40 Catch/hour: 807.04

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	561.38	1240	69.56	885
Helicolenus dactylopterus	67.68	374	8.39	886
Merluccius paradoxus	51.76	38	6.41	884
Hydrolagus sp.	37.82	64	4.69	
Caelorinchus braueri	22.30	372	2.76	
Todarodes angolensis	8.96	10	1.11	888
Lophius vomerinus	7.96	16	0.99	887
Malacocephalus laevis	7.56	14	0.94	
Raja confundens	7.17	6	0.89	
Caelorinchus simorhynchus	6.57	50	0.81	
Selachophidium guentheri	5.18	102	0.64	
Bassanago albescens	3.38	10	0.42	
Raja leopardus	3.19	4	0.39	
Bathyraja smithii	2.99	2	0.37	
Photichthys argenteus	2.89	203	0.36	
Caelorinchus matamua	2.19	8	0.27	
Todarodes angolensis	1.99	4	0.25	889
Starfish	1.11	28	0.14	
Lycoteuthis lorigera	1.00	102	0.12	
Lucigadus ori	0.80	60	0.10	
ANTHOZOA (Sea anemones)	0.58	12	0.07	
Symbolophorus boops	0.50	56	0.06	
Funchalia woodwardi	0.38	62	0.05	
Rossia enigmatica	0.30	10	0.04	
Paracallionymus costatus	0.26	42	0.03	
Tripterophycis gilchristi	0.20	8	0.02	
Parapagurus pilosimanus	0.18	10	0.02	
Gymnoscopelus sp.	0.14	18	0.02	
Nezumia sp.	0.12	8	0.02	0
Malacocephalus laevis	0.11	4	0.01	0
Nezumia sp.	0.11	0	0.01	
Epigonus sp.	0.11	4	0.01	
Physiculus capensis	0.05	4	0.01	
GALATHEIDAE	0.05	20	0.01	
Raja leopardus	0.04	4	0.01	0
Chaceon sp.	0.02	10	0.00	
Raja confundens	0.01	2	0.00	0
Mursia cristimanus	0.01	6	0.00	
Abraliopsis gilchristi	0.01	2	0.00	
Stereomastis sp.	0.00	2	0.00	
Total	807.04		100.00	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1389
DATE :03/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°53.97
start stop duration Lon E 15°2.50
TIME :15:16:13 15:46:19 30.1 (min) Purpose : 3
LOG : 5260.48 5262.16 1.7 Region : 6100
FDEPTH: 375 374 Gear cond.: 0
BDEPTH: 375 374 Validity : 0
Towing dir: 0° Wire out : 1060 m Speed : 3.4 kn
Sorted : 460 Total catch: 534.03 Catch/hour: 1064.16

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	334.77	1702	31.46	893
Epigonus sp.	139.49	1993	13.11	
Zeus capensis	137.50	195	12.92	892
Caelorinchus simorhynchus	90.47	389	8.50	
Helicolenus dactylopterus	67.75	223	6.37	895
Merluccius paradoxus	41.85	30	3.93	890
Lophius vomerinus	40.85	22	3.84	896
Scyliorhinus capensis	35.87	50	3.37	
Lepidopus caudatus	35.87	104	3.37	
Holohalaelurus regani	25.91	74	2.43	
Merluccius capensis	21.92	8	2.06	891
Malacocephalus laevis	15.94	20	1.50	
Genypterus capensis	14.55	10	1.37	894
Todarodes angolensis	8.97	12	0.84	900
Bassanago albescens	7.97	8	0.75	
ANTHOZOA (Sea anemones)	7.85	110	0.74	
Thyrsites atun	6.58	4	0.62	898
Squalus mitsukurii	5.38	4	0.51	
Todarodes angolensis	5.18	10	0.49	899
Malacocephalus laevis	2.64	0	0.25	0
Brama brama	2.59	2	0.24	897
Tube corals	2.29	0	0.22	
Raja leopardus	1.99	2	0.19	
Todaropsis eblanae	1.40	18	0.13	901
Galeus polli	1.39	8	0.13	
Todaropsis eblanae	1.01	14	0.09	902
Paracallionymus costatus	0.99	98	0.09	
Cynoglossus zanzibarensis	0.97	24	0.09	903
Hoplostethus mediterraneus	0.97	14	0.09	
Cyttus traversi	0.77	4	0.07	
URCHINS	0.65	6	0.06	
Lucigadus ori	0.53	70	0.05	
Starfish	0.29	0	0.03	
Rossia enigmatica	0.25	14	0.02	
Rochinia sp.	0.15	54	0.01	
Macropipus australis	0.09	2	0.01	
Tripterophycis gilchristi	0.09	10	0.01	
Mursia cristimanus	0.05	6	0.00	
Parapagurus pilosimanus	0.03	2	0.00	
Physiculus capensis	0.03	4	0.00	
Exodromidia sp.	0.00	2	0.00	
Total	1063.83		99.97	

R/V "DR. FRIDTJOF NANSEN" SURVEY:2007401 STATION: 1390
DATE :03/02/2007 GEAR TYPE: BT NO: 20 POSITION:Lat S 29°49.55
start stop duration Lon E 15°11.09
TIME :17:43:55 18:13:10 29.3 (min) Purpose : 3
LOG : 5273.06 5274.70 1.6 Region : 6100
FDEPTH: 271 268 Gear cond.: 0
BDEPTH: 271 268 Validity : 0
Towing dir: 0° Wire out : 750 m Speed : 3.4 kn
Sorted : 157 Total catch: 156.75 Catch/hour: 321.54

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Zeus capensis	102.56	308	31.90	905
Etrumeus whiteheadi	82.05	1026	25.52	
Galeorhinus galeus, male	30.77	2	9.57	
Thyrsites atun	17.03	10	5.30	904
Emmelichthys nitidus	13.64	41	4.24	
Helicolenus dactylopterus	12.31	172	3.83	907
Todarodes angolensis	9.85	16	3.06	913
Merluccius capensis	9.23	4	2.87	906
Galeus polli	8.21	49	2.55	
Zeus capensis	5.33	4	1.66	
Caelorinchus simorhynchus	4.41	47	1.37	
Epigonus sp.	3.90	51	1.21	
PORIFERA (Sponges)	3.79	0	1.18	
Todarodes angolensis	3.59	8	1.12	912
Malacocephalus laevis	3.18	29	0.99	
Squalus mitsukurii	2.67	2	0.83	
Genypterus capensis	2.46	4	0.77	910
Cynoglossus zanzibarensis	2.26	39	0.70	911
Merluccius paradoxus	1.64	25	0.51	908
Starfish	1.33	0	0.41	
Paracallionymus costatus	0.51	111	0.16	
Rossia enigmatica	0.23	10	0.07	
Merluccius paradoxus	0.21	25	0.06	909
CORAL	0.13	0	0.04	
Todaropsis eblanae	0.11	2	0.03	915
Sebastes capensis	0.05	2	0.02	
Rochinia sp.	0.02	14	0.01	
Helicolenus dactylopterus	0.02	14	0.01	914
Inioteuthis capensis	0.02	8	0.01	
ANTHOZOA (Sea anemones)	0.01	6	0.00	
Abraliopsis gilchristi	0.01	2	0.00	
Sepia sp.	0.01	2	0.00	
Total	321.53		100.00	

Annex 2 Instruments and fishing gear

The Simrad EK-500, 38 kHz scientific echosounder was used for abundance estimation during the survey, in addition data from the 18 kHz, 120 kHz and 200 kHz transducers where logged for possible future multi frequency target estimation. The Bergen Echo Integrator system (BEI) were logging the echogram raw data from the sounder and used to scrutinize the acoustic records, and to allocate integrator data to fish species. All raw data were stored to tape, and a backup of the database of scrutinized data, stored. The details of the settings of the echosounders were as follows:

Transceiver 1 menu	
Transducer depth	5.5 m
Absorption coeff.	10 dB/km
Pulse length	medium (1ms)
Bandwidth	wide
Max power	2000 Watt
2-way beam angle	-21.0 dB
SV transducer gain	27.17dB
TS transducer gain	29.96
Angle sensitivity	21.9
3 dB beamwidth along.	7.3
3 dB beamwidth athw.	7.0
Alongship offset	0.05
Athwardship offset	0.04

Transceiver 2 menu	
Transducer depth	5.5 m
Absorption coeff.	38 dB/km
Pulse length	long (1ms)
Bandwidth	narrow
Max power	1000 Watt
2-way beam angle	-20.6 dB
SV transducer gain	25.96B
TS transducer gain	25.95dB
Angle sensitivity	21.0
3 dB beamwidth along.	7.4
3 dB beamwidth athw.	7.2

Alongship offset	0.24
Athwardship offset	0.04

Transceiver 3 menu

Transducer depth	5.5 m
Absorption coeff.	3 dB/km
Pulse length	short (0.7ms)
Bandwidth	wide
Max power	2000 Watt
2-way beam angle	-17.2 dB
SV transducer gain	23.75dB
TS transducer gain	23.36B
Angle sensitivity	13.9
3 dB beamwidth along.	10.8
3 dB beamwidth athw.	10.8
Alongship offset	0.06
Athwardship offset	-004

Transceiver 4 menu

Transducer depth	5.5 m
Absorption coeff.	53 dB/km
Pulse length	long (0.6ms)
Bandwidth	narrow
Max power	1000 Watt
2-way beam angle	-20.5 dB
SV transducer gain	24.18dB
TS transducer gain	24.80B
Angle sensitivity	0.0
3 dB beamwidth along.	0.0°
3 dB beamwidth athw.	0.0°
Alongship offset -	0.00°
Athwardship offset	0.00°

Display menu

Echogram	1
Bottom range	10 m
Bottom range start	10 m
TVG	20 log R
Sv colour min -	65 dB
TS Colour minimum	-65 dB

Printer- menu

Range	0-50, 0-100, 0-150, 0-250 or 0-500 m
TVG	20 log R
Sv colour min	-67 dB

Bottom detection menu

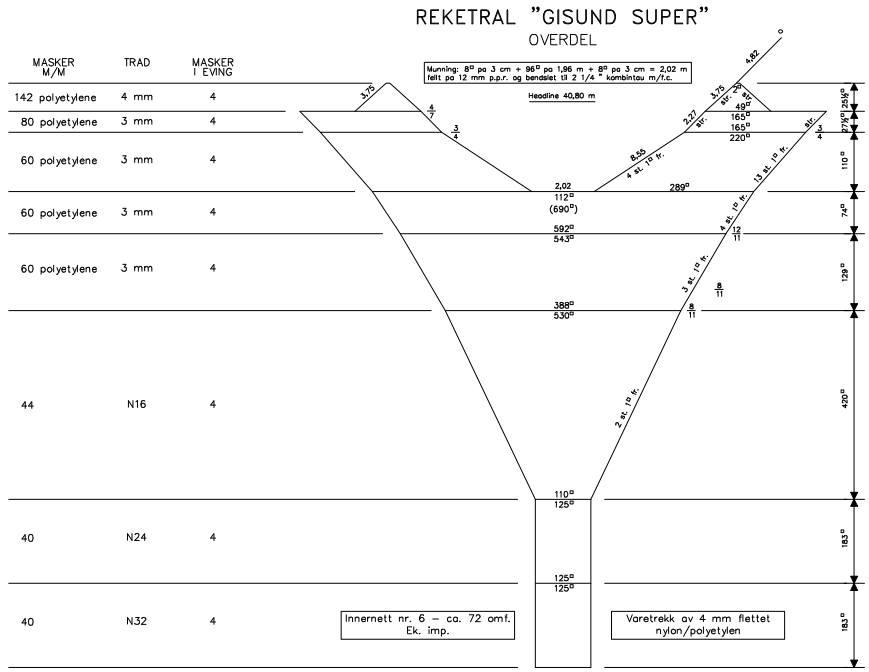
Minimum level	-40 dB

Calibration

A calibration of the acoustic instruments was conducted during the survey in Angola on 18 August 2006.

Fishing gear

The vessel has two different sized "Åkrahamn" pelagic trawls and one "Gisund super" bottom trawl. For all trawls, the Tyborøn, 7.8m² (1670 kg) trawl doors were used.



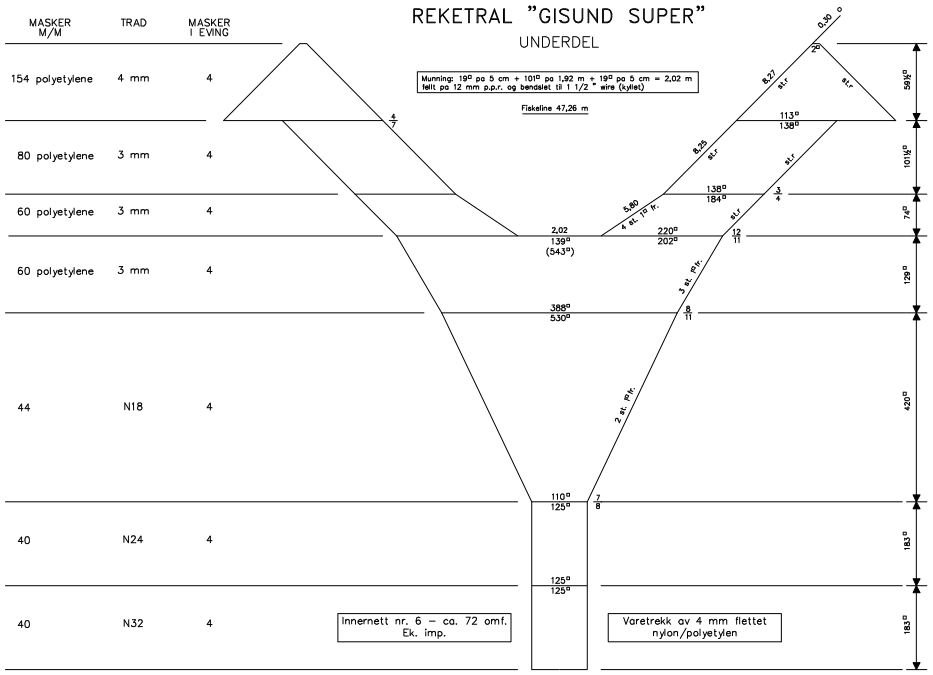


Figure 1 Design of the trawl used.

Figure 2 Schematic drawing of the ground gear used in the experiment.

Annex 3 Depth strata in MN^2 by latitude in Namibia and South Africa.

NAMIBIA. Depth strata by 1^o latitude in NM^2

(Based on echo soundings from Nansen surveys 1996-2003. Depths from surface to bottom). 02.02.2003 OBA

	0-50 m	50-100 m	100-200m	200-300m	300-400m	400-500m	500-600m	600-700m	700-800m	800-900m	900-1000m	Total	0-600m
$17^o15'$-18^o	47	162	490	243	95	63	65	46	46	54	47	1360	1165
18-19^o	287	324	783	822	154	128	119	101	100	87	128	3033	2618
19-20^o	186	435	1259	810	1090	328	287	266	*192*	*241*	*220*	5314	4396
20-21^o	229	401	1378	883	987	286	265	258	*272*	*281*	*280*	5519	4429
21-22^o	372	547	1644	563	893	257	201	200	*199*	*184*	*179*	5238	4477
22-23^o	479	709	2196	1086	929	154	126	127	108	97	*142*	6153	5678
23-24^o	244	376	2006	1074	670	238	153	175	139	*136*	*130*	5340	4760
24-25^o	394	433	1343	822	753	238	149	161	162	166	144	4764	4131
25-26^o	204	415	1580	1102	529	227	166	155	161	153	*125*	4817	4223
26-27^o	216	184	894	986	1408	744	140	*133*	*139*	*131*	*119*	5095	4573
27-28^o	119	244	1269	527	858	480	205	170				3872	3702
28-29^o	211	390	4207	*391*	153	123	164					5639	5639
29-30^o	0	0	1042	533	327	276	162	167	107	121	121	2859	2341
30^o-S	0	0	0	0	0	0	0	0	0	3	5	8	0
North	750	1322	3911	2759	2326	806	736	670	610	663	675	15226	12608
Central	1489	2064	7189	3544	3245	887	627	664	608	582	595	21494	19046
South	750	1234	8992	3540	3276	1850	837	625	408	407	371	22290	20478

Total	2988	4620	20091	9842	8848	3543	2200	1960	1625	1652	1642	59003	52132

Areas in *Italics*: few soundings, interpolated

Open areas: no or very few soundings

South Africa. Depth strata by 1^{o} latitude in NM^{2}

(Based on echo soundings from Nansen surveys 1996-2004. Depths from surface to bottom). *10.03.2004 OBA*

	0-100 m	100-200m	200-300m	300-400m	400-500m	500-600m	600-700m	700-800m	800-900m	900-1000m	Total	0-500 m	0-600m
28^{o}40'-29^{o}	186	303	0	0	0	0	0	0	0	0	489	489	489
29-30^{o}	359	4348	451	195	202	23	7	2	0	0	5588	5556	5579
30-31^{o}	200	2481	3443	460	465	262	177	135	193	149	7965	7049	7311
31-32^{o}	288	2187	1794	1209	894	493	211	173	180	149	7577	6371	6864
32-33^{o}	839	1308	1318	1303	432	156	122	111	109	116	5815	5201	5357
33-34^{o}	654	833	546	375	381	247	243	117	120	102	3617	2789	3036
34-35^{o}	1280	1376	662	496	259	134	80	69	53	66	4475	4074	4208
35-36^{o}	25	1901	778	168	143	131	89	86	59	84	3464	3015	3146
36-37^{o}													
Total	3830	14737	8992	4207	2777	1446	929	692	714	666	38989	34543	35989

South Africa. Depth strata by regions in NM^2 *26.08.2005 OBA*

	0-100 m	100-200m	200-300m	300-400m	400-500m	500-600m	600-700m	700-800m	800-900m	900-1000m	Total	0-500 m	0-600m
Oranjemund-S. Hondeklip Bay	742	6835	4262	1062	1152	634	314	262	282	230	15776	14054	14688
S. Hondeklip Bay-n Saldanha	1169	3593	2685	2257	1088	454	392	224	242	230	12333	10792	11245
n Saldanha-C. of Good Hope	746	982	935	598	325	154	89	83	59	77	4047	3586	3740
C. of Good Hope-C. Agulhas	1131	3098	998	473	202	167	104	81	58	87	6397	5901	6068
Total	3787	14508	8881	4390	2767	1409	898	650	641	624	38554	34333	35741