

## 2012 BCC survey no. 1

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

Cruise report No 1/2012

24 January – 28 February 2012

by  
Tore Strømme<sup>1)</sup>, Marek Lipinski<sup>2)</sup>, Paul Kainge<sup>3)</sup> and Oddgeir Alvheim<sup>1)</sup>

<sup>1)</sup> Institute of Marine Research, Bergen, Norway

<sup>2)</sup> Marine and Coastal Management, Cape Town, South Africa

<sup>3)</sup> Ministry of Fisheries and Marine Resources, Namibia

Bergen September 2012



## **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 oeuvre 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 oeuvre et le suivi des progrès de la mise en oeuvre de plans d'aménagement des ressources marines conformes à l'approche écosystémique des pêches.

## Table of contents

<b>1 Introduction .....</b>	<b>1</b>
<b>2 Materials and methods.....</b>	<b>3</b>
2.1 Registration of weather conditions.....	3
2.2 Hydrography.....	3
2.3 Current measurements.....	4
2.4 Acoustic measurements .....	4
2.4.1 Acoustic equipment.....	4
2.4.2 Classification.....	4
2.5 Trawl sampling procedures .....	5
2.5.1 Handling the catch .....	6
2.5.2 Biological samples .....	6
<b>3 Narrative.....</b>	<b>7</b>
<b>4 Results .....</b>	<b>10</b>
4.1 Biology .....	10
4.2 Repeated 48-hours trawl stations and catch of live gobies for NatMIRC.....	
<b>5 Considerations of the survey results, <i>M. paradoxus</i> .....</b>	<b>24</b>
<b>6 References.....</b>	<b>24</b>
Annex 1	Records of fishing stations
Annex 2	Instruments and fishing gear
Annex 3	Depth strata in MN <sup>2</sup> by latitude in Namibia and South Africa

## 1 Introduction

One of the key areas of the BCLME focus has been 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. The BCLME programme has therefore been involved in supporting appropriate research that could contribute to improved conservation and management efforts of this transboundary fish resource. This led in 2003 to the first coordinated survey of the hake resources in the West Coast of South Africa using similar gear and methods as for the Namibian trawl surveys running since 1990. This enabled joint analysis of fish distribution and abundance with a special focus on the shared stock of deep water hake, *M. paradoxus*. This survey was repeated in 2005 under BCLME. During the bridging phase of the BENEFIT project (2006-2007) the BENEFIT resources working group emphasised the long term needs for the management of the transboundary stocks and recommended to continue the joint surveys with Namibia early in the year as a high priority for the years 2006 and 2007. Both BENEFIT and BCLME came to close at the end 2007 while the following Benguela Current Commission did not become functional before August 2008. In the interim period an interim steering committee decided it was vital to uphold the time series on the shared stocks of hake and requested the FAO to assist through the EAF-Nansen Programme with a survey in the beginning of 2008. The same request was repeated in late 2008 for a survey in 2009. In a Regional Steering Committee meeting for the EAF-Nansen project in the BCC held in Windhoek in October 2009 the representatives of BCC, Namibia and South-Africa emphasised that it was a priority for the BCC to continue the timeseries. The time series now thus comprise the years 2003 and 2005 - 2012.

Specific objectives of this 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 collect data on the maturity stages of the hakes to check for possible spawning activity.

3. 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.
4. To conduct early life investigations on hake by two 48-hours trawl stations using multisampler collecting hakes in 3 depths between Hondeklip Bay and Panther Head.
5. If time permits to collect live gobies for further studies in the lab of NatMIRC in Swakopmund..

## 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 <sup>2</sup>
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 its 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 Acoustic measurements

#### *2.4.1 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.

#### *2.4.2 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.

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 coarse for such a purpose. Adult hake were very rarely observed in the acoustic channel during daytime, while it showed up frequently above bottom at night-time.

## 2.5 Trawl sampling procedures

The standard bottom trawl of Dr. Fridtjof Nansen, a Gisund Super shrimp cum fish trawl, was used in the survey. 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.

### 2.5.1 *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.



### 2.5.2 *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 (team leader)

Interns, South Africa:

Nina Voogt, Kyle Cooper, Charles v d Meden and Justin Blake (24.01-28.02)

Jessica Escobar, Bernadine Everett, Danielle Boyd, Melanie Smith, Laura Benneton and Dylan Cooper (24.01-01.02)

Vicky Johnson, Zuko Nkomo, T B Masifane and M J Gibberd (01-28.02)

From NatMIRC, Namibia:

Thea Matesu and Claudia Kanduuombe (01-28.02)

From IMR, Norway:

Oddgeir Alvheim (cruise leader), Tore Mørk (instrument chief), Jan Frode Wilhelmsen

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

The vessel departed Cape Town in the afternoon of 24 January, steaming south to Cape Agulhas where trawl sampling started next morning, see Figure 3.1. Sampling proceeded west and northwards in regular transects about 20 nm apart, until a call at Cape Town for a crew change on 1 February. The vessel resumed the regular field work with transect sampling until 19-21 February when a 48-hours stationary station sampling juvenile hake at a location about 60 nm west off Hondeklip Bay was executed. The final part of the main survey was finished 3 days later. A bottom trawl haul was done in a position where juvenile deep water hake is commonly found on Namibian hake surveys, about 70 nautical miles west off Orange River). A second 48 hours station was successfully made in this position.

The vessel then steamed northwards and interrupted with 2 bottom trawl hauls near Lüderitz and one near Walvis Bay to catch live gobies for further studies in the NATMIRC lab in Swakopmund. The survey was completed with arrival in Walvis Bay on the morning of 28 February.

The weather was generally workable with south easterly winds throughout the survey, Figure 3.2..

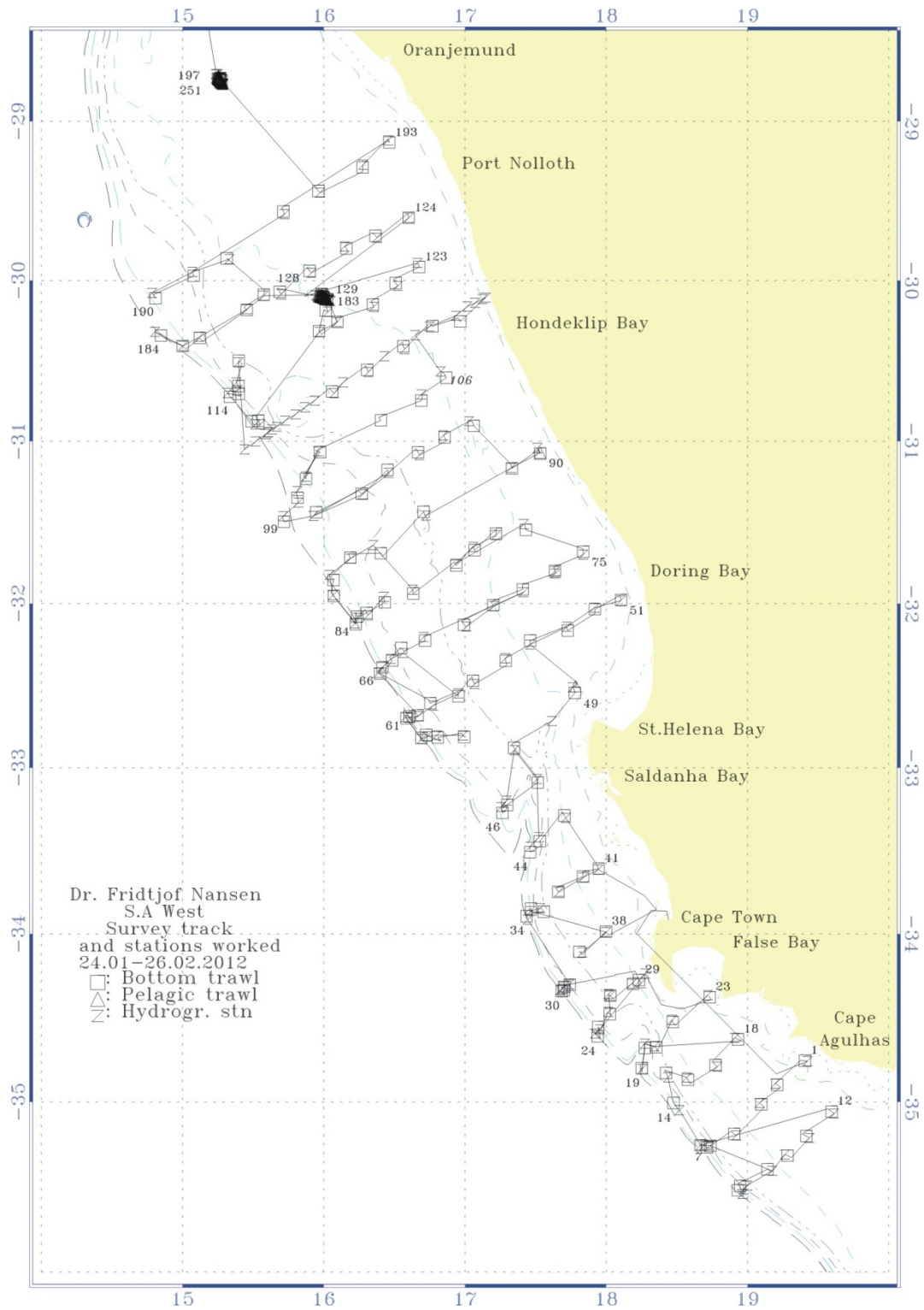


Figure 3.1 Course tracks with hydrographic and trawl stations Cape Agulhas-Orange River.

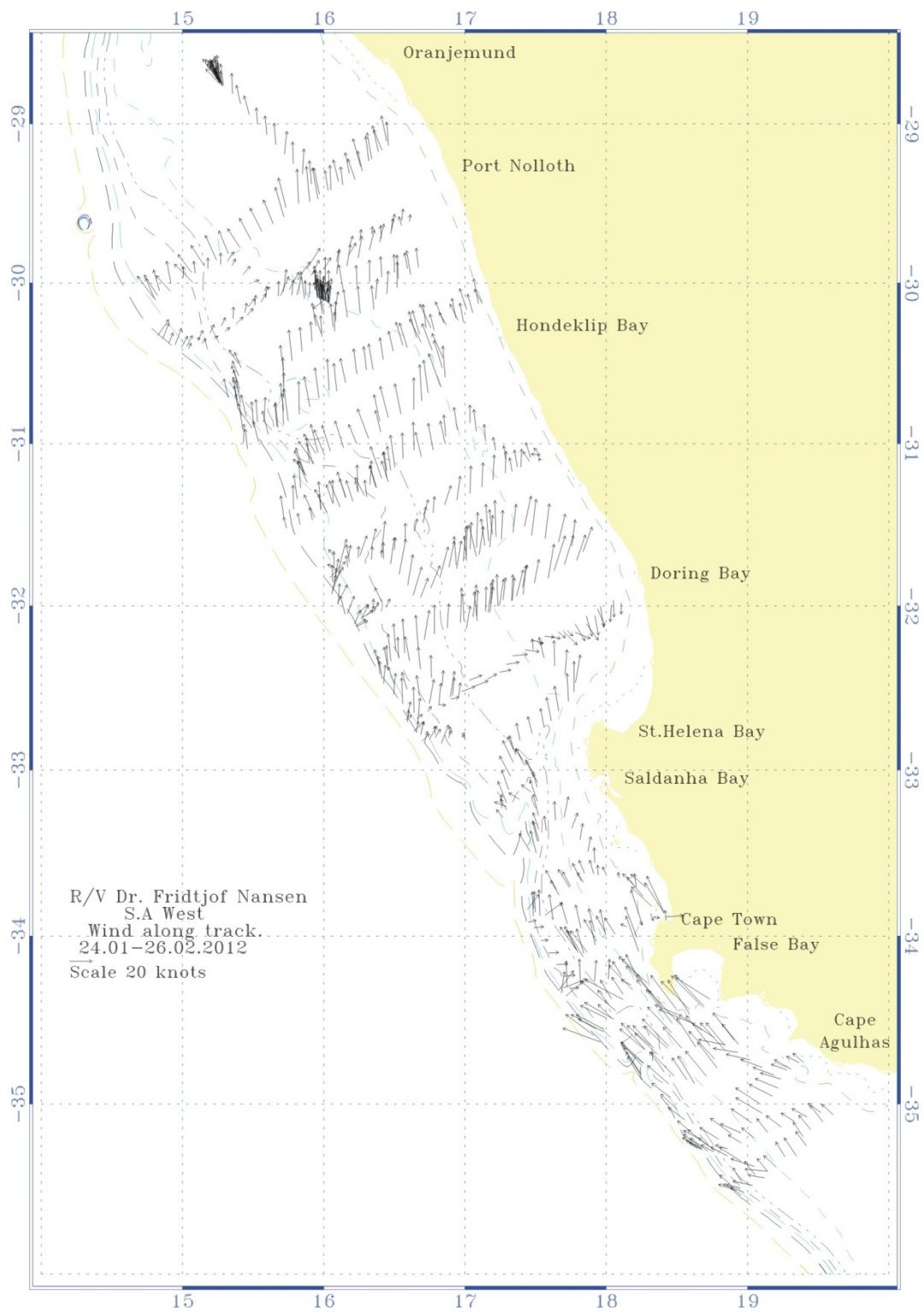


Figure 3.2 Wind conditions along the survey tracks.

## 4 Results

### 4.1 Biology

Annex 1 shows the complete record of the fishing stations. 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 Hondeklip Bay, stretching further north than in the later years. Previously the high density areas stretch north to Saldhana Bay. This indicates an increase in the adult biomass since last year. Relative poor concentrations of juvenile fish are found mid-shelf between St. Helena Bay and Hondeklip Bay in contrast to earlier years. This signals expected poor recruitment to the adult stock during 2012. The juvenile fish do not extend in quantities north of Hondeklip Bay, in contrast to the distribution pattern prior to 2008. No spill-over of juveniles north over the Orange Banks into Namibia was observed, in line with findings since 2007, indicating that the years 2003-2006 when this was observed, represents a different environment regime.

The distribution of shallow water hake (*M. capensis*) is more uniform (Fig. 4.4) and at generally low level except for an aggregation of juvenile fish in the shallow waters between St. Helena Bay and Hondeklip Bay. This low level pattern is in agreement with earlier years.

The density estimates from the point samples have been converted into biomass estimates by length classes. The similar data from the Namibian trawl survey running in the same period have been processed following similar procedures. The joint estimates on deep water hake are shown in Table 4.1. Figure 4.5 shows the regional distribution of deep water hake from combining the Namibian and South African data for the west coast. 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 Figure 4.6b shows the % share of the biomass of the respective countries in numbers by length. There is an increased share of fish in Namibian waters from 20 cm length onto about 60cm much in line with previous years. For the 30-35cm length class the share in Namibian waters is more than 60% and around 50% for the 40-55cm length class. This is in line with the general share pattern observed in the period 2003-2009, with 2010 as an anomaly giving a much higher relative share in South African waters. Beyond 60 cm the Namibian share is decreasing and from approximately 65 cm more than 85% of the fish is found in South African waters. This is the same general trend as from previous surveys.

Generally speaking the cohort with a modal length around 20 cm is exclusively in South African waters, Figure 4.6, Table 4.1. This is fish approximately 1 ½ years old, the 2010 year-class. It is also of lower abundance than normal as seen from the scattered distribution on shelf, Figure 4.3. The abundance estimate of the 20-24cm group is 935 million fish as compared to 1833 million fish one year earlier. This year's survey thus indicate a below normal recruitment for the 2010 yearclass. The 2011 yearclass, depicted with a modal length about 7cm has some representation in Namibia, less than 20%, but is dominantly also in South Africa. In the period from 2007 until 2011 no small fish were spilling over the Orange Banks from South Africa into Namibia (Figure 4.5). This was also confirmed in 2012. The Orange Banks as a gateway to Namibia seems however to function in the early period of the timeseries 2003-2006.

Figure 4.7 shows the distribution of 'baby' hake 5-6 cm as observed from all trawl hauls. The fish is located mid-shelf in small patches southwest off Cape Agulhas, Saldanha Bay and Doring Bay. A larger patch was found off Hondeklip Bay. The 'baby' hake mostly found between 180 and 240 m bottom depth, in line with the previous years. Although most of the 'baby hake' is pelagic, its consistent presence in the bottom trawl in this area, and not outside, indicate that these are aggregation and nursery areas for the very young deep water hake. It is not mixed with shallow water hake at these locations.

Since 2009 small patches of baby hake has been observed off the Cape Peninsula (2009) and off False Bay (2010), and now (2011 and 2012) off Cape Agulhas. This indicate that there could be a minor nursery area in this region, but that it is not stable and of less importance as compared to the main area off Hondeklip Bay.

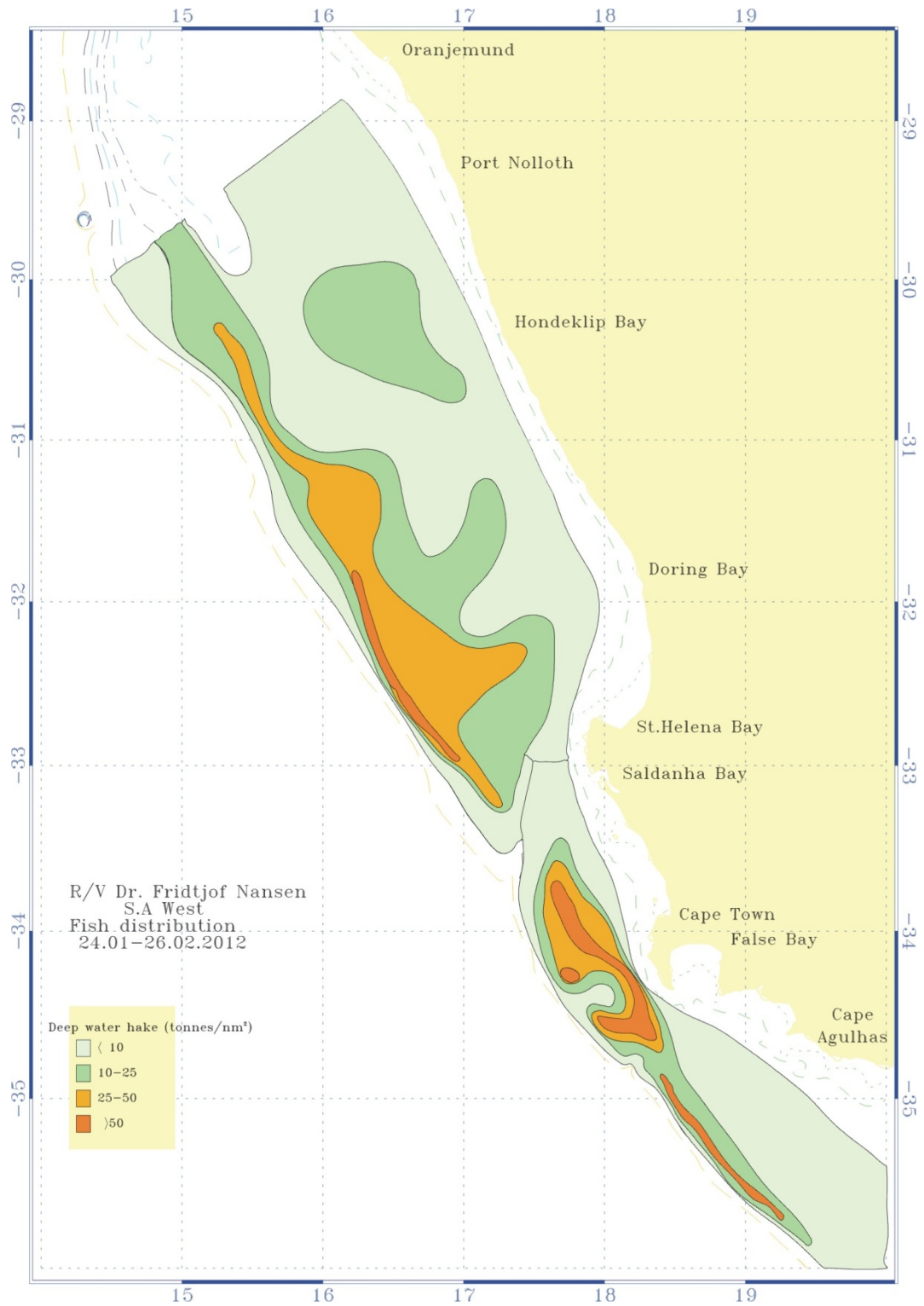


Figure 4.3 Distribution of deep-water hake (*Merluccius paradoxus*) Cape Agulhas-Orange River.

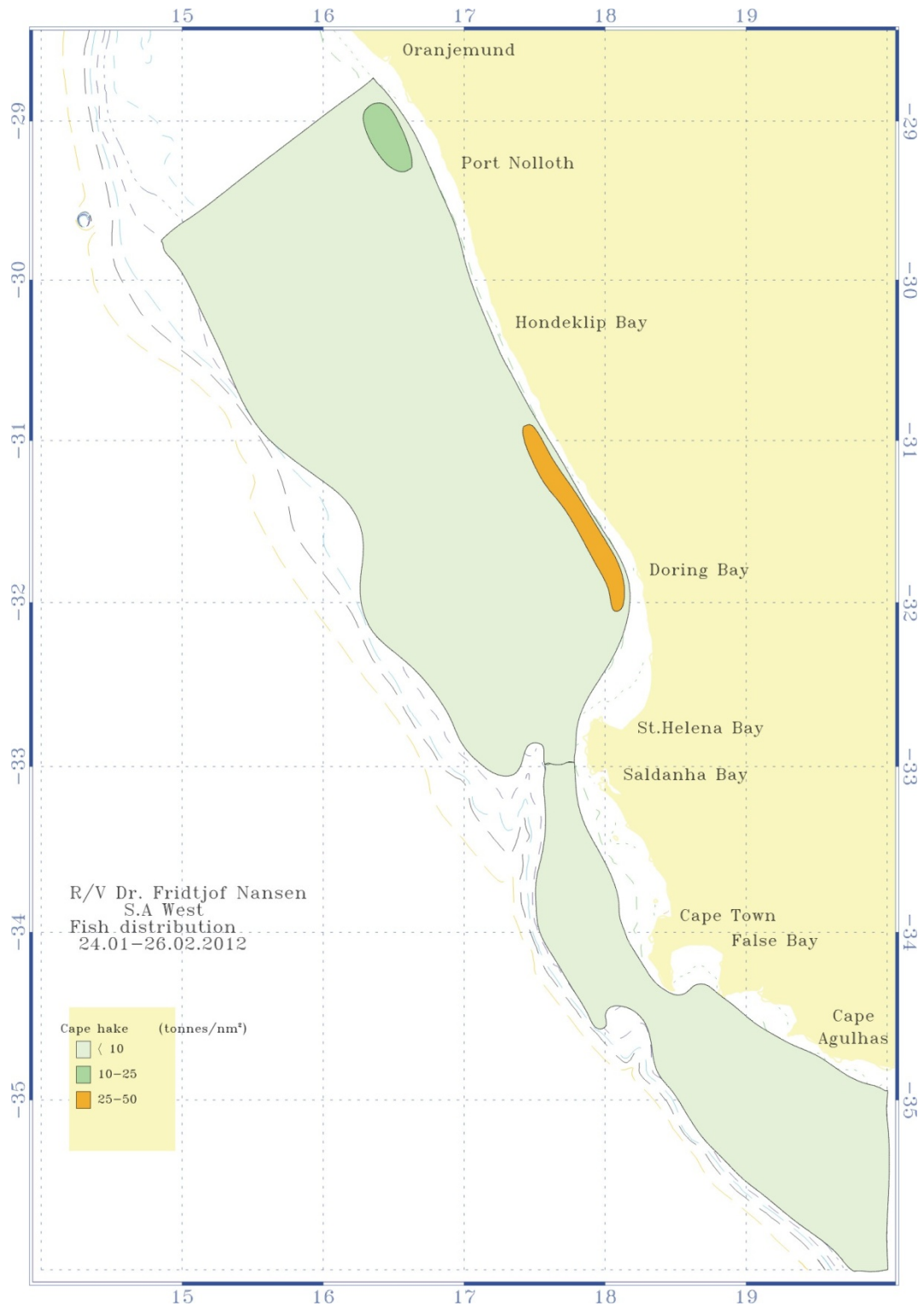


Figure 4.4 Distribution of Cape hake (*Merluccius capensis*) Cape Agulhas-Orange River.

Table 4.4 shows the biomass estimates of deep water hake split by fishable and non-fishable biomass in Namibia and South Africa west coast for the years 2003, 2005-2012. Figure 4.8a and 4.8b show the Namibian and South African biomasses plotted against each other for the non-fishable and fishable biomass respectively. The non-fishable biomass in South Africa varies between 200 000 and 300 000 tonnes while in Namibia the range is 50 000 to 100 000



tonnes. The combined estimates of fish less than 36 cm from the two countries varies from 268 thousand tonnes to 362 thousand tonnes in the period 2003-2012, which indicate a fairly stable system consistently providing new recruits into the adult biomass. The 2012 country-combined estimate of 282 thousand tonnes is in the lower range in the observed period, and the lowest observed in South Africa. Added that the 2010 estimate was the highest recorded, 362 thousand tonnes, this indicate that recruitment in the transboundary deep water hake stock has been higher than average in the later years (2010-2011), but will likely now face some reduction.

Table 4.1 Regional abundance estimates of *M. paradoxus*. (2012)

Length	Biomass in tonnes			Number in millions		
	Namibia	S. Africa	Total	Namibia	S. Africa	Total
0						
5	130	336	466	34.0	94.5	128.5
10	491	5297	5787	57.4	414.9	472.3
15	1137	32121	33258	29.3	915.1	944.4
20	7692	52947	60638	105.6	830.1	935.7
25	24383	55368	79751	195.5	443.0	638.5
30	44798	42076	86874	206.8	202.5	409.3
35	40101	26750	66850	125.7	82.4	208.1
40	37303	34626	71929	77.9	72.3	150.2
45	37272	36752	74024	56.6	55.8	112.4
50	13935	23842	37777	15.9	26.7	42.6
55	5329	16914	22243	4.7	14.1	18.8
60	2066	9279	11345	1.4	6.1	7.5
65	710	6569	7279	0.3	3.4	3.7
70	448	2809	3257	0.2	1.1	1.3
75		1696	1696		0.6	0.6
80		773	773		0.4	0.4
85		96	96		0.0	0.0
90						
95						
100						
Total	215793	348249	564042	911.3	3163.0	4074.3
Non-fishable	88657	193375	282032	664.7	2919.0	3583.7
Fishable	127136	154875	282010	246.6	243.8	490.4

The fishable biomass, Figure 4.8b shows a relative stable level in the years 2003, 2005 and 2006. The gradual increase in the biomass 2007-2009 seems to indicate close to a linear relationship between the two countries' share of the biomass. In 2010 there was further increase of the biomass of *M. paradoxus* since the previous year. However this all over

increase of about 10%, showed up as a 40% increase in South African waters compensated by a 27% decline in Namibian waters. As pointed out in the 2010 cruise report this indicated a major shift in the distribution of the deep water hake stock at the same time as it was in an expanding phase. In 2011 and 2012 the relationship between fishable biomass in South Africa and Namibia is back at the long term linear trend (Fig 4.8b), at the same time as the combined fishable biomass is the highest recorded in the time series, 267 and 282 thousand tonnes for 2011 and 2012 respectively, Table 4.4. In the first years of the timeseries (2003, 2005, 2006) the average fishable biomass was estimated to 120 thousand tonnes. In 2008-2009 the estimate was around 200 thousand tonnes while in the 2010-2012 period the average estimate is 260 thousand tonnes, and following an almost linear trend. This indicates a very favourable growth of close to 120% in the population of adult fish over a 9 year period. While the increase in South Africa has been from about 80 thousand tonnes to roughly 155 thousand tonnes, i.e. 94 %, the similar increase in Namibia has been from 40 thousand to 130 thousand tonnes, i.e. an increase of 225%. From a biological perspective this seems to indicate a healthy stock that is in a growing phase at the same time as it is gradually expanding geographically beyond its pristine area (South Africa) into a frontier area (Namibia).

This time series does not include the south coast of South Africa which was only surveyed once with Dr. Fridtjof Nansen, in 2011. It would be interesting to see if a similar positive trend, i.e. signals of an expanding adult stock could also be observed in the Africana timeseries in the same period (2003-2012) on the south coast as well.

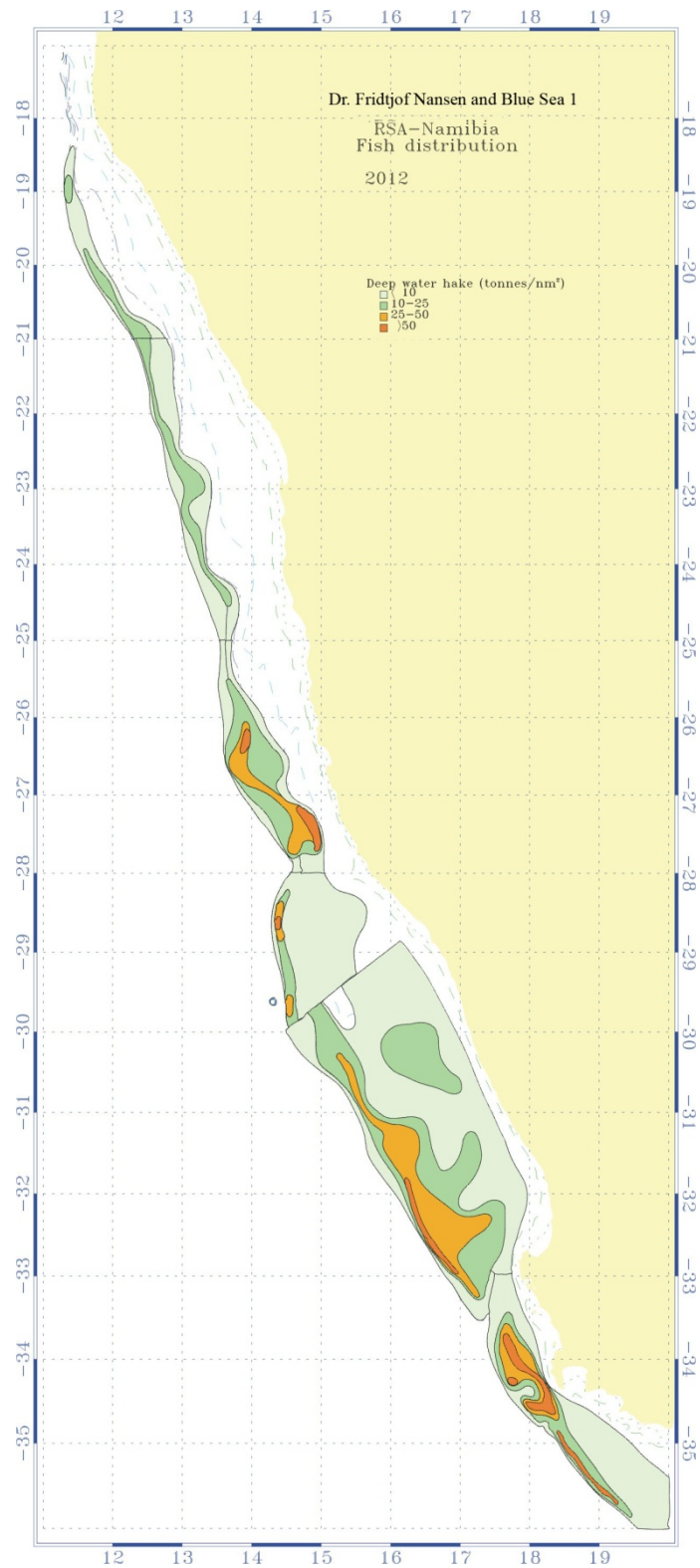


Figure 4.5 Distribution of deep-water hake (*M. paradoxus*) from Cunene to Cape Agulhas 2012.

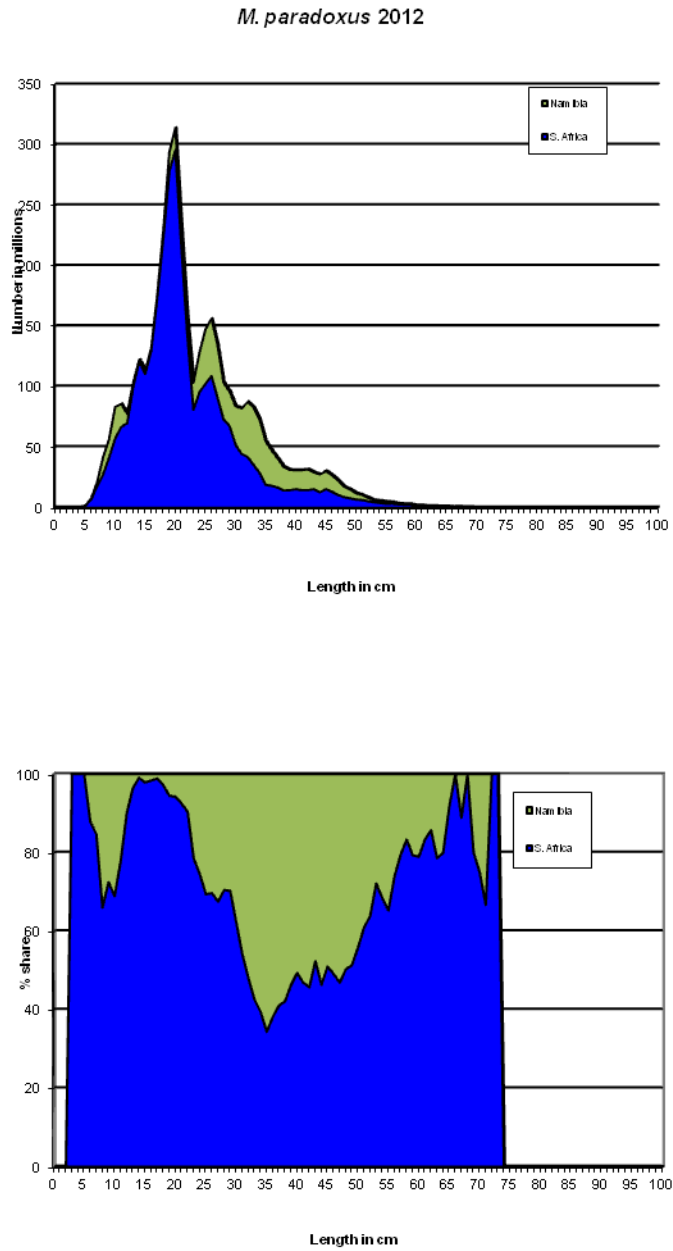


Figure 4.6 a) Estimated abundance in numbers of deep-water hake by 1 cm length classes. Namibia (green) added on top of South-Africa (blue).  
 b) % share between South-Africa (blue) and Namibia (green) of deep-water hake in numbers by 1 cm length classes in January-February 2012.

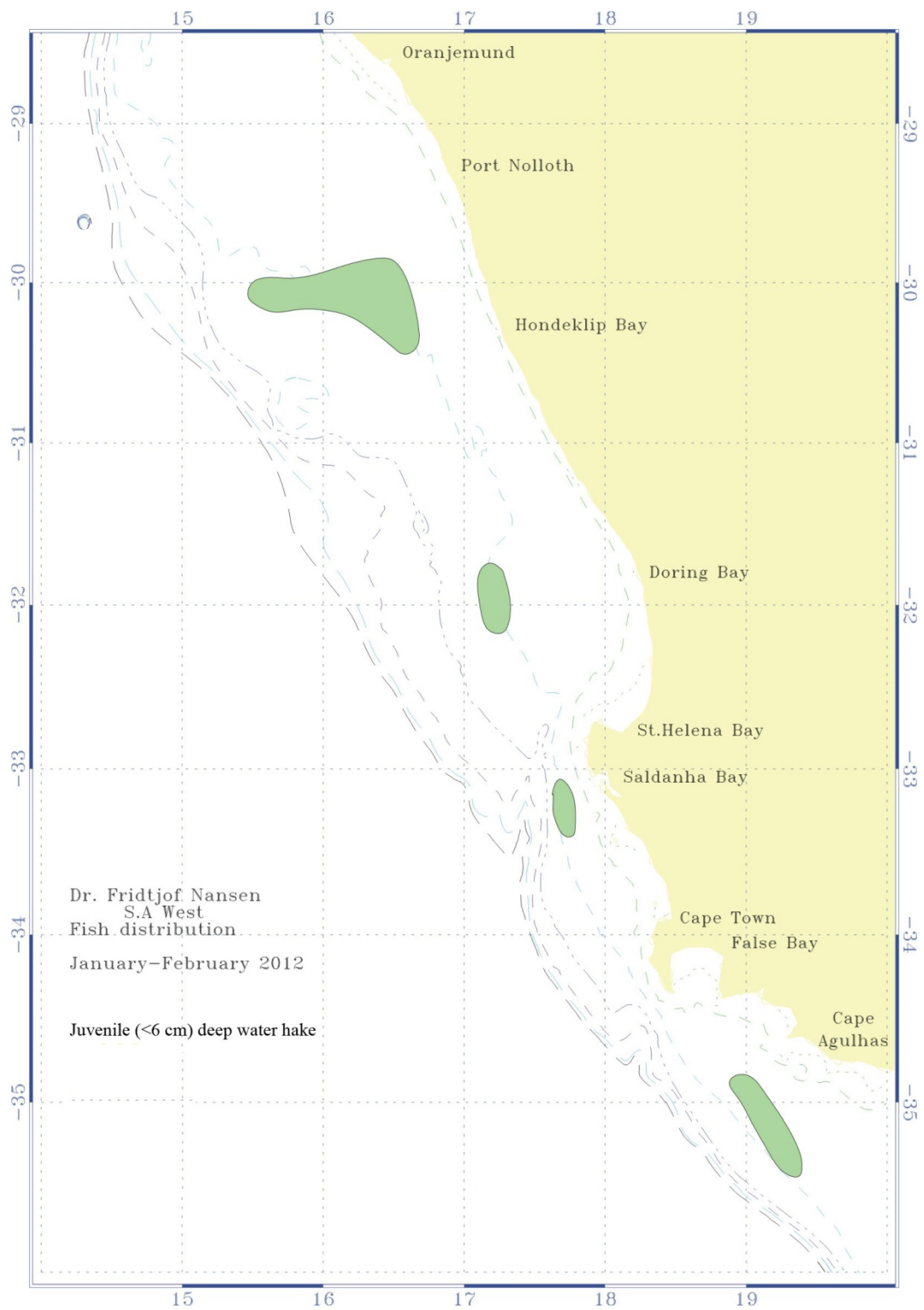


Figure 4.7 Presence of baby hake (<6 cm length) in trawl catches.

Table 4.4 Non-fishable and fishable biomass deep water hake  
 Namibia and South Africa west coast 2003-2012.

Year	Non-Fishable			Fishable			TOTAL
	Namibia	South Africa	SUM	Namibia	South Africa	SUM	
2003	76361	232227	308588	40080	79455	119535	428123
2005	68235	200077	268312	46962	88850	135812	404124
2006	71781	273640	345420	43417	66823	110240	455660
2007	81984	234518	316502	66044	79894	145937	462440
2008	71080	194948	266028	92272	117127	209400	475428
2009	52139	231501	283640	76081	121594	197676	481315
2010	65282	296928	362210	55571	170823	226394	588604
2011	104506	237331	341837	128991	138242	267233	609070
2012	88657	193375	282032	127136	154875	282010	564042

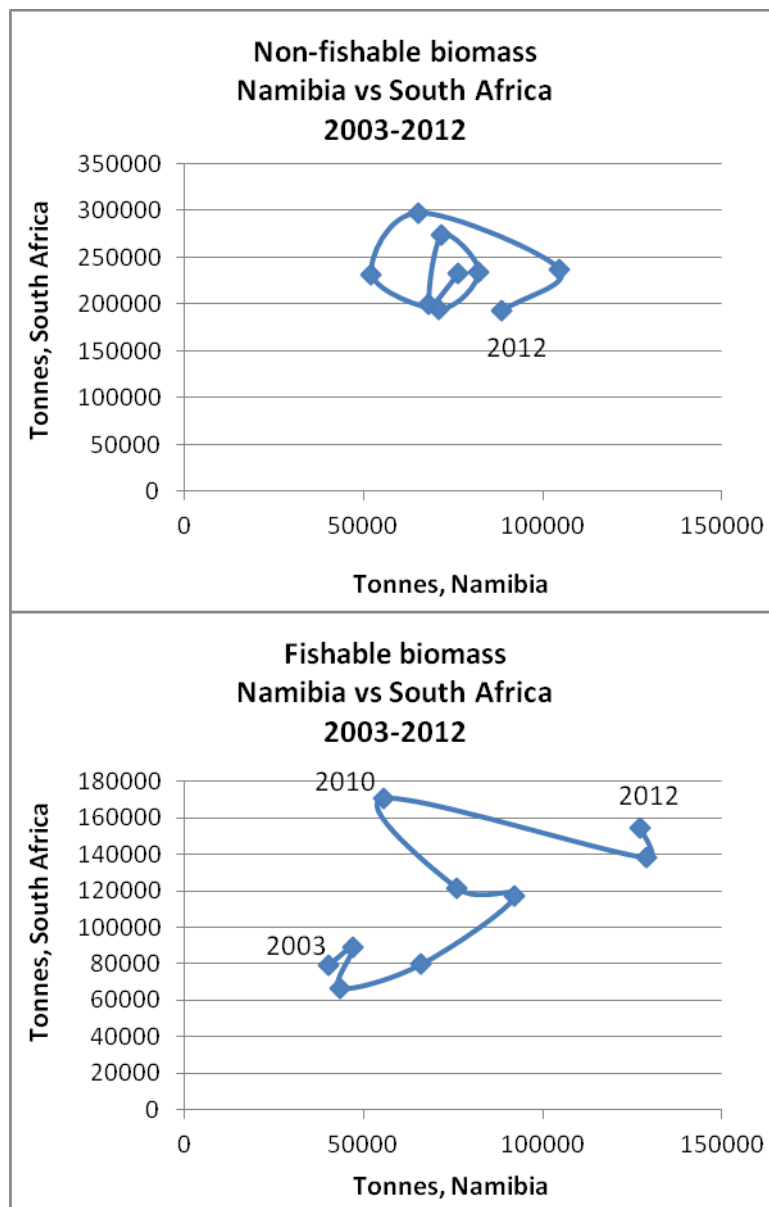


Figure 4.8. Relationship between biomass estimates on deep water hake in Namibia and South Africa.  
 Above: Non-fishable biomass (<36cm), Below: fishable biomass.

Table 4.5 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.

Table 4.5 Density estimates of *M. paradoxus* by depth strata and regions. (2012)

Region	0-100 m	100-199 m	200-299 m	300-399 m	400-499 m	500-599 m	600-699 m
Cunene - 21°S	n.a.	0.00	0.00	1.36	3.80	16.53	8.53
21°S - 25°S	n.a.	0.00	0.00	8.04	6.92	11.23	6.97
25°S - Orange River	0.00	0.58	16.04	24.51	21.44	7.14	6.01
Orange River - Hondeklip Bay	n.a.	4.52	8.43	20.62	21.06	9.78	6.69
Hondeklip Bay - Saldanha Bay	n.a.	4.25	8.55	19.25	34.28	24.35	6.95
Saldanha Bay - Cape of Good Hope	n.a.	7.97	67.22	46.54	31.10	7.23	n.a.
Cape of Good Hope - Cape Agulhas	0.00	1.06	5.90	57.12	102.08	48.71	n.a.

Table 4.6 Density estimates of *M. capensis* by depth strata and regions. (2012)

Region	0-100 m	100-199 m	200-299 m	300-399 m	400-499 m	500-599 m	600-699 m
Cunene - 21°S	n.a.	8.06	17.99	26.31	1.21	0.01	0.00
21°S - 25°S	n.a.	34.49	21.68	7.05	0.00	0.01	0.00
25°S - Orange River	13.34	9.72	27.12	1.92	0.01	0.02	0.00
Orange River - Hondeklip Bay	n.a.	2.24	1.60	2.42	0.00	0.00	0.00
Hondeklip Bay - Saldanha Bay	n.a.	7.26	2.00	1.89	0.18	0.00	0.00
Saldanha Bay - Cape of Good Hope	n.a.	1.31	2.21	0.66	0.35	0.00	n.a.
Cape of Good Hope - Cape Agulhas	2.11	5.92	5.58	.93	0.00	0.00	n.a.

#### 4.2 Repeated 48-hours trawl stations and catch of live gobies for NatMIRC.

The hake survey was interrupted for two days west off Hondeklip Bay where small juvenile deep-water hake were found. This position is the same as a 48-hours trawl station was carried out on the survey in February-March 2009. The procedure and the results for the repeated trawl station investigations are presented in the cruise report, see Stenevik *et al.* 2009.

Another repeated trawl station was carried out in a position west off Oranjemund where Namibian hake surveys has often shown fair catches of juvenile deep water hake. A trawl haul verified juveniles in the this locality and the second 48-hours trawl stations were subsequently executed.

The results from the survey in 2009 and this survey will be presented in a separate paper. The figure below is showing the catch rates (number/hour) of juvenile hake in three depths,

Shallow (about 30m), Midwater and Near bottom (about 20 m above the bottom). The trawls were repeated every three hours.

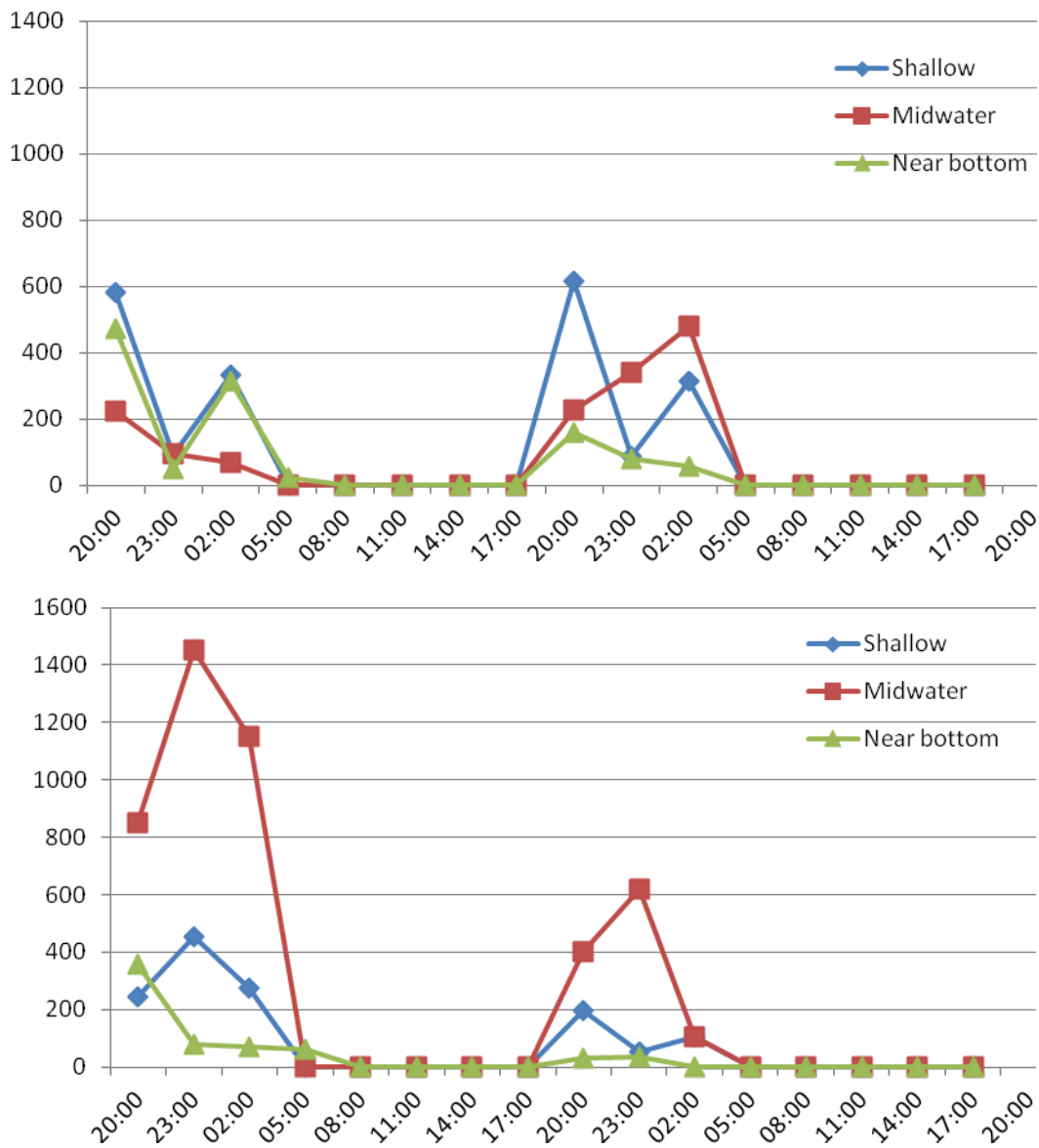


Figure 4.9 Catch (number per hour) plotted against time (UTC) for *Merluccius paradoxus* during the repeated 48-hours trawl stations. The first experiment on top and the second below.

Two successful bottom trawl hauls were done to catch gobies to keep live. About 20 gobies were picked up by scientists from NatMIRC for further experiments.



## 5 Considerations of the survey results, *M. paradoxus* 2003-2012

The findings from the survey 24 January-28 February 2012 combined with similar findings from the Namibian survey in the period 12 January-21 February and from the previous surveys confirms 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.
- The early pelagic stage is mainly confined to the central-outer part of the shelf off Port Nolloth and in a small area off the Cape Peninsula.
- 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 spill over of juvenile fish northwards over the Orange Banks into Namibia. The main gateway between Namibia and South Africa seems to be along the slope. The same pattern has been sustained in the period 2007-2012 while in the preceding years there was a continuous channel of fish extending into Namibia over the Orange Banks during the January surveys. There might though be a seasonal pattern not revealed in the timeseries as all surveys are in January-February.
- 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, in consistency with previous surveys, only recorded in South Africa.
- The main part of the juveniles is at the time of the survey in 2012 located in South Africa which holds about 70% of the non-fishable biomass (fish smaller than 36cm) while the fishable biomass (bigger than 35cm) is about evenly shared between the countries, (55% in South Africa).
- The adult part of regional standing stock has been on a rising trend in the last six years. The regional estimate of fishable biomass has increased from 110 thousand tonnes in 2006 to roundly 280 thousand tonnes in 2012, representing a 150% increase. The increase has been stronger in Namibia (190%) as compared to South Africa (130%) indicating that the stock is in a geographical expanding phase.

- Generally for all years; for the size range 55 to 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 in terms of the life cycle.
- From 2009 to 2010 there has been recorded a major shift in the distribution of adult hake between the two countries, as the share in South Africa increased to 75%. In 2011 the pattern is back to the normal for the whole timeseries, around 50%.
- The south coast of South Africa was in 2010 covered for the first time as part of the BCC surveys on transboundary stocks in order to have full synoptic survey and to investigate to what extent the southern stock component showed connectivity to the fish on the west coast. The deep water hake in this region was estimated to 100 thousand tonnes, which represents 15 % of the total paradoxus 2010 estimate and 18% of the South African estimate.
- The deep water hake in this region consisted in 2010 mainly of fish in the size range 35-70cm. The young fish less than 36cm (“non-fishable biomass”) on the south coast comprises less than 5% in terms of biomass of this fish in South African waters. This indicates that the southern component is mainly supplied by recruits from the west coast. The whole region from Port Alfred to the Cunene could therefore be understood as an integrated connected system as regards one unit stock of deep water hake.
- Blue Sea and “Dr. Fridtjof Nansen” use identical trawls and similar survey design and sampling protocol. The catchability coefficient in the biomass estimates applied is 0.8. Since the catchability coefficient of the trawl used on Dr. Fridtjof Nansen and Blue Sea has not been calibrated against absolute densities in the path of the trawl, the biomass estimates given here should not be considered as absolute biomass, but as indices of biomass. Thus the essential information is in relative comparisons and trends.

## **6 References**

Stenevik, E.K., Lipinski, M. and Zaera, D. 2009. Transboundary survey between Namibia and South Africa with focus on the juvenile stage of deep water hake. Survey No. 2 2009. 28 pp. Mimeo.

# Annex 1 Records of fishing stations

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 1  
 DATE :25/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 34°45.32  
 LOG : start stop duration Lon E 19°24.44  
 TIME :07:00:52 07:31:22 30.5 (min) Purpose : 3  
 LOG : 79.53 81.11 1.6 Region : 6100  
 FDEPTH: 86 88 Gear cond.: 0  
 BDEPTH: 86 88 Validity : 0  
 Towing dir: 0° Wire out : 220 m Speed : 3.1 km  
 Sorted : 176 Total catch: 176.07 Catch/hour: 346.36

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Merluccius capensis	131.43	211	28.90
Merluccius capensis	81.65	161	17.95
Lophius vomerinus	37.84	60	8.32
Brown sand dollar	27.88	0	6.13
Thyrsites atun	21.11	28	4.64
Chelidonichthys capensis	19.32	44	4.25
Merluccius paradoxus	15.53	56	3.42
Callorhynchus capensis	14.34	6	3.15
Todaropsis eblanae	12.94	323	2.85
Loligo reynaudi	12.35	80	2.71
Raja straeleni	10.95	10	2.41
Holohalaelurus regani	7.97	24	1.75
Merluccius capensis	6.97	6	1.53
Brama brama	5.97	4	1.31
Loligo reynaudi	5.18	40	1.14
Lepidopus caudatus	4.78	38	1.05
Starfish	4.58	0	1.01
Sepia australis	4.58	520	1.01
Etrumeus whiteheadi	3.19	62	0.70
Chelidonichthys queketti	2.99	12	0.66
Merluccius capensis	2.51	64	0.55
Squalus megalops	2.39	6	0.53
Paracallionymus costatus	2.39	450	0.53
Zeus capensis	2.19	64	0.48
Helicolenus dactylopterus	2.17	46	0.48
Cynoglossus zanzibarensis	1.99	36	0.44
Trachurus capensis	1.99	54	0.44
Holohalaelurus regani	1.99	8	0.44
Coelorhynchus simorhynchus	1.21	10	0.27
Genypterus capensis	1.00	8	0.22
Nudibranchs	0.66	98	0.15
Merluccius paradoxus	0.65	189	0.14
Octopus vulgaris	0.60	2	0.13
Parapagurus dimorphus	0.39	66	0.08
Congiopodus spinifer	0.31	4	0.07
Giant bullia gastropod	0.25	8	0.05
Raja pullopunctata	0.20	2	0.04
Gastropod nei	0.12	2	0.03
Pterygosquilla armata capensis	0.10	6	0.02
Engraulis capensis	0.05	4	0.01
Exodromidia sp.	0.04	2	0.01
Mursia cristimanus	0.03	2	0.01
Rochinia sp.	0.01	2	0.00
Mytilus sp.	0.01	2	0.00
S H R I M P S	0.00	2	0.00
Total	454.76	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Trachurus capensis	194.75	8024	56.23
Chelidonichthys capensis	53.15	142	15.35
Callorhynchus capensis, female	30.30	33	8.75
Merluccius capensis	24.79	81	7.16
Black sand dollar	14.75	57	4.26
J E L L Y F I S H	10.62	4	3.07
Raja straeleni, male	5.31	2	1.53
Engraulis capensis	2.56	287	0.74
Loligo reynaudi	1.57	12	0.45
Conglopodus corvus	1.34	2	0.39
Etrumeus whiteheadi	1.28	120	0.37
Squalus mitsukurii	1.14	2	0.33
Mursia cristimanus	0.89	63	0.26
Zeus capensis	0.83	10	0.24
Gorgonians	0.79	2	0.23
Chelidonichthys queketti	0.63	10	0.18
Gonorhynchus gonorhynchus	0.59	4	0.17
Nudibranchs	0.20	18	0.06
Cynoglossus zanzibarensis	0.20	2	0.06
Starfish white 5 arms	0.16	26	0.05
Sardinops ocellatus	0.14	4	0.04
Merluccius capensis	0.12	22	0.03
Sepia australis	0.07	12	0.02
Exodromidia sp.	0.06	2	0.02
Turbo sp. Gastropod	0.06	4	0.02
Turritella	0.03	8	0.01
Argyropelecus aculeatus	0.02	2	0.01
Paracallionymus costatus	0.01	2	0.00
Lolligoncula mercatoris	0.01	4	0.00
Total	346.36	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 2  
 DATE :25/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 34°53.95  
 LOG : start stop duration Lon E 19°12.64  
 TIME :09:21:26 09:51:38 30.2 (min) Purpose : 3  
 LOG : 94.54 96.02 1.5 Region : 6100  
 FDEPTH: 156 155 Gear cond.: 0  
 BDEPTH: 156 155 Validity : 0  
 Towing dir: 0° Wire out : 380 m Speed : 2.9 km  
 Sorted : 309 Total catch: 1329.31 Catch/hour: 2641.01

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 4  
 DATE :25/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°11.37  
 LOG : start stop duration Lon E 18°54.34  
 TIME :14:05:24 14:35:55 30.5 (min) Purpose : 3  
 LOG : 123.86 125.38 1.5 Region : 6100  
 FDEPTH: 227 229 Gear cond.: 0  
 BDEPTH: 227 229 Validity : 0  
 Towing dir: 0° Wire out : 570 m Speed : 3.0 km  
 Sorted : 400 Total catch: 1184.57 Catch/hour: 2329.53

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Trachurus capensis	1135.69	6901	48.75
Parapagurus dimorphus	429.94	61420	18.46
Merluccius paradoxus	234.02	751	10.05
Merluccius capensis	157.33	138	6.75
Coelorhynchus simorhynchus	129.79	1937	5.57
Merluccius capensis	74.73	83	3.21
Lophius vomerinus	30.13	28	1.29
Merluccius paradoxus	23.53	163	1.01
Lepidopus caudatus	18.29	31	0.79
Todaropsis eblanae	10.06	146	0.43
Thyrsites atun	9.44	12	0.41
Brama brama	9.36	14	0.40
Chelidonichthys capensis	8.46	10	0.36
Raja straeleni	8.46	8	0.36
Paracallionymus costatus	7.46	1066	0.32
Merluccius paradoxus	4.87	568	0.21
Zeus capensis	4.52	10	0.19
Helicolenus dactylopterus	4.33	28	0.19
Merluccius paradoxus	4.33	14	0.19
Loligo reynaudi	4.22	32	0.18
Squalus mitsukurii	4.13	10	0.18
Holohalaelurus regani	3.93	14	0.17
Helicolenus dactylopterus	2.45	98	0.11
Merluccius capensis	2.11	16	0.09
Sepia australis	1.33	98	0.06
Cynoglossus zanzibarensis	1.27	49	0.05
Starfish white 5 arms	1.22	146	0.05
Etrumeus whiteheadi	1.14	16	0.05
Merluccius capensis	0.98	2	0.04
Lepidopus caudatus	0.97	16	0.04
Brown sand dollar	0.32	16	0.01
Holohalaelurus punctatus	0.28	2	0.01
Exodromidia sp.	0.24	16	0.01
Champsodon capensis	0.21	16	0.01
Total	2329.53	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Etrumeus whiteheadi	1486.59	3717	56.29
Trachurus capensis	494.90	15322	18.74
Engraulis capensis	209.75	8068	7.94
Merluccius capensis	206.62	312	7.82
Chelidonichthys capensis	56.62	155	2.14
Merluccius capensis	53.64	115	2.03
Lophius vomerinus	31.79	34	1.20
J E L L Y F I S H	20.36	2	0.77
Raja straeleni	17.48	10	0.66
Todaropsis eblanae	15.27	815	0.58
Callorhynchus capensis	10.73	4	0.41
Holohalaelurus regani	8.54	26	0.32
Sepia australis	5.99	469	0.23
Zeus capensis	4.07	81	0.15
Chelidonichthys queketti	2.98	20	0.11
Merluccius paradoxus	2.78	10	0.11
Merluccius capensis	2.04	81	0.08
Cynoglossus zanzibarensis	1.99	24	0.08
Starfish red (pentagon)	1.87	121	0.07
Lepidopus caudatus	1.47	62	0.06
Squalus megalops	1.03	2	0.04
Helicolenus dactylopterus	0.99	2	0.04
Pterygosquilla armata capensis	0.90	101	0.03
Scomber japonicus	0.81	20	0.03
Lophius vomerinus	0.71	20	0.03
Genypterus capensis	0.50	4	0.02
Sepia hieronis	0.24	20	0.01
Paracallionymus costatus	0.22	42	0.01
Parapagurus dimorphus	0.10	20	0.00
Total	2641.01	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 3  
 DATE :25/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°0.89  
 LOG : start stop duration Lon E 19°5.89  
 TIME :11:29:43 11:59:51 30.1 (min) Purpose : 3  
 LOG : 106.84 108.34 1.5 Region : 6100  
 FDEPTH: 176 175 Gear cond.: 0  
 BDEPTH: 176 175 Validity : 0  
 Towing dir: 0° Wire out : 440 m Speed : 3.0 km  
 Sorted : 228 Total catch: 228.37 Catch/hour: 454.76

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Trachurus capensis	106.84	108.34	1.5
Merluccius capensis	176	175	0
Merluccius capensis	176	175	0
Total	228	228.37	454.76

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 5  
 DATE :25/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°15.59  
 start stop duration Lon E 18°44.21  
 TIME :15:59:24 16:20:06 20.7 (min) Purpose : 3  
 LOG : 135.61 136.77 1.2 Region : 6100  
 FDEPTH: 380 375 Gear cond.: 0  
 BDEPTH: 380 375 Validity: 0  
 Towing dir: 0° Wire out : 800 m Speed : 3.4 km  
 Sorted : 164 Total catch: 1139.37 Catch/hour: 3302.52

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 8  
 DATE :26/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°29.73  
 start stop duration Lon E 18°56.84  
 TIME :06:10:16 06:37:21 27.1 (min) Purpose : 3  
 LOG : 205.06 206.23 1.2 Region : 6100  
 FDEPTH: 454 455 Gear cond.: 0  
 BDEPTH: 454 455 Validity: 0  
 Towing dir: 0° Wire out : 1000 m Speed : 2.6 km  
 Sorted : 584 Total catch: 3207.05 Catch/hour: 7105.73

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius paradoxus	2562.32	8299	77.59
Merluccius paradoxus	266.09	5322	8.06
Coelorinchus simorhynchus	229.13	1551	6.94
Todaropsis eblanae	46.81	122	1.42
Merluccius paradoxus	46.81	319	1.42
Merluccius paradoxus	33.62	17	1.02
Merluccius capensis	32.46	14	0.98
Parapagurus dimorphus	18.23	913	0.55
Anemones, pink	13.06	148	0.40
Lophius vomerinus	9.28	3	0.28
Merluccius capensis	8.41	6	0.25
Brama brama	6.96	6	0.21
Merluccius paradoxus	5.51	6	0.17
Parapagurus pilosimanus	4.93	81	0.15
Paracallionymus costatus	4.68	591	0.14
Genypteris capensis	3.88	3	0.12
Giant bullia gastropod	3.45	72	0.10
Anemones, white	3.20	23	0.10
Starfish - many arms	0.99	125	0.03
Starfish white 5 arms	0.99	197	0.03
Mursia cristimanus	0.99	75	0.03
Holohalaelurus regani	0.74	75	0.02
Total	3302.52	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius paradoxus	5769.57	21682	81.20
Merluccius paradoxus	912.85	609	12.85
Helicolenus dactylopterus	102.36	465	1.44
Merluccius paradoxus	81.98	84	1.15
Coelorinchus simorhynchus	74.45	1908	1.05
Anemones, pink	74.45	326	1.05
Todaropsis eblanae	41.88	279	0.59
Starfish - many arms	18.61	0	0.26
Raja leoparden	5.12	47	0.07
Lophius vomerinus	4.87	2	0.07
Brama brama	4.65	2	0.07
Parapagurus pilosimanus	4.28	233	0.06
Whelks	3.26	47	0.05
Sea pens	2.28	47	0.03
Lucigadus ori	1.58	140	0.02
Paracallionymus costatus	1.30	140	0.02
Coelorinchus braueri	1.12	93	0.02
Stereomastis sp.	0.91	47	0.01
Rochinia sp.	0.47	47	0.01
Symbolophorus boops	0.14	47	0.00
Total	7105.73	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 6  
 DATE :25/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°16.16  
 start stop duration Lon E 18°42.71  
 TIME :17:25:37 17:45:45 20.1 (min) Purpose : 3  
 LOG : 140.78 141.59 0.8 Region : 6100  
 FDEPTH: 468 467 Gear cond.: 0  
 BDEPTH: 468 467 Validity: 0  
 Towing dir: 0° Wire out : 1000 m Speed : 2.4 km  
 Sorted : 166 Total catch: 166.01 Catch/hour: 495.07

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 9  
 DATE :26/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°23.83  
 start stop duration Lon E 19°8.46  
 TIME :09:29:39 10:00:26 30.8 (min) Purpose : 3  
 LOG : 220.06 221.74 1.7 Region : 6100  
 FDEPTH: 230 227 Gear cond.: 0  
 BDEPTH: 230 227 Validity: 0  
 Towing dir: 0° Wire out : 550 m Speed : 3.3 km  
 Sorted : 313 Total catch: 1027.01 Catch/hour: 2001.32

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius paradoxus	268.99	262	54.33
Merluccius paradoxus	131.21	182	26.50
Coelorinchus simorhynchus	43.24	1083	8.73
Anemones, pink	9.99	230	2.02
Lophius vomerinus	9.54	3	1.93
Helicolenus dactylopterus	5.96	57	1.20
Genypteris capensis	5.96	3	1.20
Todaropsis eblanae	4.47	33	0.90
Malaccocephalus laevis	3.88	12	0.78
Paracallionymus costatus	2.50	334	0.51
Starfish - many arms	1.79	358	0.36
Anemones, white	1.26	36	0.25
Holohalaelurus regani	1.10	75	0.22
Starfish white 5 arms	0.97	125	0.20
Rossia enigmatica	0.91	24	0.18
Haliporoides triarthrus	0.58	107	0.12
Lucigadus ori	0.52	83	0.10
Stereomastis sp.	0.51	86	0.10
Psychrolutes macrocephalus	0.38	39	0.08
Giant bullia gastropod	0.32	9	0.07
S H R I M P S	0.24	128	0.05
Merluccius paradoxus	0.16	3	0.03
Scombrus boops	0.10	12	0.02
Bathypolypus valdiviae	0.10	6	0.02
Histioteuthis macrohista	0.09	3	0.02
Physiculus capensis	0.09	6	0.02
Parapagurus pilosimanus	0.05	3	0.01
Mursia cristimanus	0.03	3	0.01
Raja sp.	0.03	3	0.01
Lamparnycodes hectoris	0.03	6	0.01
Sepia sp.	0.02	3	0.00
Stoloteuthis sp.	0.02	3	0.00
Olivaceae	0.01	3	0.00
Total	495.07	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Trachurus capensis	791.17	6809	39.53
Parapagurus dimorphus	536.86	67109	26.83
Merluccius capensis	261.12	140	13.05
Merluccius paradoxus	93.24	366	4.66
Merluccius capensis	79.90	60	3.99
Coelorinchus simorhynchus	70.64	974	3.53
Todaropsis eblanae	52.70	861	2.63
Merluccius capensis	28.26	43	1.41
Holohalaelurus regani	10.52	35	0.53
Raja straeleni	9.94	4	0.50
Starfish - many arms	9.04	904	0.45
Zeus capensis	8.48	28	0.42
Cynoglossus zanzibarensis	6.08	70	0.30
Helicolenus dactylopterus	5.65	43	0.28
Chelidonichthys capensis	5.26	8	0.26
Loligo reynaudi	5.12	28	0.26
Squalus megalops	5.07	14	0.25
Thyrssites atun	4.87	2	0.24
Lophius vomerinus	3.90	4	0.19
Paracallionymus costatus	3.11	522	0.16
Octopus vulgaris	1.98	14	0.10
Starfish white 5 arms	1.84	269	0.09
Lepidopus caudatus	1.36	2	0.07
Holohalaelurus punctatus	1.29	8	0.06
Merluccius paradoxus	0.97	84	0.05
Starfish red (pentagon)	0.69	14	0.03
Starfish	0.69	27	0.03
Genypteris capensis	0.62	2	0.03
Rochinia sp.	0.59	156	0.03
Brown sand dollar	0.30	14	0.01
Raja sp.	0.06	14	0.00
Olivaceae	0.01	14	0.00
Total	2001.32	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 7  
 DATE :26/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°31.26  
 start stop duration Lon E 18°55.90  
 TIME :04:30:16 05:00:38 30.4 (min) Purpose : 3  
 LOG : 198.54 200.20 1.7 Region : 6100  
 FDEPTH: 568 562 Gear cond.: 0  
 BDEPTH: 568 562 Validity: 0  
 Towing dir: 0° Wire out : 1140 m Speed : 3.3 km  
 Sorted : 1045 Total catch: 1044.53 Catch/hour: 2064.29

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 10  
 DATE :26/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°19.03  
 start stop duration Lon E 19°17.00  
 TIME :11:35:13 12:06:00 30.8 (min) Purpose : 3  
 LOG : 231.23 232.79 1.6 Region : 6100  
 FDEPTH: 186 183 Gear cond.: 0  
 BDEPTH: 186 183 Validity: 0  
 Towing dir: 0° Wire out : 460 m Speed : 3.0 km  
 Sorted : 206 Total catch: 248.91 Catch/hour: 485.36

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius paradoxus	1472.33	2115	71.32
Merluccius paradoxus	276.68	462	13.40
Merluccius paradoxus	140.32	136	6.80
Chaceon sp.	36.56	326	1.77
Anemones, pink	33.60	190	1.63
Coelorinchus braueri	23.72	1318	1.15
Helicolenus dactylopterus	13.83	166	0.67
Lophius vomerinus	11.86	6	0.57
S H R I M P S	11.19	1599	0.54
Torpedo nobiliana	10.47	2	0.51
Coelorinchus simorhynchus	6.44	85	0.31
Notacanthus sexspinis	5.69	85	0.28
Starfish - fleshy	4.55	12	0.22
Malaccocephalus laevis	3.32	10	0.16
Centrolophus niger	3.24	2	0.16
Psychrolutes macrocephalus	1.65	10	0.08
Starfish - many arms	1.46	731	0.07
Myxine sp.	1.46	16	0.07
Whelks	1.11	18	0.05
Raja leoparden	0.96	12	0.05
Bassanago albescens	0.59	2	0.03
Merluccius paradoxus	0.59	12	0.03
Raja sp.	0.52	18	0.03
Nezumia sp.	0.42	57	0.02
Hoplostethus mediterraneus	0.26	10	0.01
Etmopterus brachyurus	0.25	2	0.01
Lucigadus ori	0.22	18	0.01
Tripterothyris gilchristi	0.17	8	0.01
Stereomastis sp.	0.16	20	0.01
Rossia enigmatica	0.14	6	0.01
Aristeus sp.	0.11	4	0.01
Bathypolypus valdiviae	0.08	2	0.00
Shark eggs	0.07	6	0.00
Mundopsis sp.	0.06	6	0.00
Physiculus capensis	0.06	8	0.00
Symbolophorus boops	0.05	4	0.00
Kuronezumia leonis	0.05	2	0.00
Merluccius paradoxus	0.03	2	0.00
C R A B S	0.02	2	0.00
Stoloteuthis sp.	0.01	2	0.00
Dirtemus argenteus	0.01	2	0.00
Total	2064.29	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius capensis	132.60	222	27.32
Parapagurus dimorphus	71.66	5971	14.76
Strumus whiteheadi	47.77	655	9.84
Lophius vomerinus	32.76	47	6.75
Merluccius paradoxus	21.45	86	4.42
Squalus megalops	19.50	51	4.02
Todaropsis eblanae	19.11	433	3.94
Chelidonichthys capensis	14.04	25	2.89
Trachurus capensis	13.99	195	2.88
Raja straeleni	12.87	10	2.65
Brown sand dollar	11.60	283	2.39
Loligo reynaudi	9.75	47	2.01
Paracallionymus costatus	9.21	2303	1.90
Mustelus palumbes	8.58	10	1.77
Raja wallacei	7.80	6	1.61
Holohalaelurus regani	6.01	18	1.24
Helicolenus dactylopterus	5.85	37	1.21
Chelidonichthys queketti	5.65	23	1.17
Sepia australis	5.26	659	1.08
Merluccius paradoxus	4.09	1219	0.84
Brama brama	3.90	4	0.80
Loligo reynaudi	3.12	18	0.64
Starfish red (pentagon)	3.11	105	0.64
Unidentified invertebrate	2.39	0	0.49
Cynoglossus zanzibarensis	1.95	25	0.40
Genypteris capensis	1.44	6	0.30
Merluccius capensis	1.33	27	0.27
Exodromidia sp.	1.31	82	0.27
Congiopodus spinifer	0.97	6	0.20
Anemones, yellow	0.96	4777	0.20
Thyrssites atun	0.78	2	0.16
Starfish - many arms	0.54	55	0.11
Anemones, white	0.54	4	0.11
Cynoglossus zanzibarensis	0.44	24	0.09
Sepia hieronis	0.41	10	0.08
Loligo reynaudi	0.41	3	0.08
Starfish white 5 arms	0.39	41	0.08
Giant bullia gastropod	0.35	23	0.07
Helicolenus dactylopterus	0.31	24	0.06
Raja pullopunctata	0.27	2	0.06
Lepidopus caudatus	0.27	2	0.06
Zeus capensis	0.24	7	0.05
Whelks	0.22	4	0.04
Champsodon capensis	0.15	27	0.03
Total	485.36	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 11  
 DATE :26/01/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 35°12.09  
 start stop duration Lon E 19°24.96  
 TIME :13:43:24 14:13:48 30.4 (min) Purpose : 3  
 LOG : 243.86 245.53 1.7 Region : 6100  
 FDEPTH: 170 171 Gear cond.: 0  
 BDEPTH: 170 171 Validity : 0  
 Towing dir: 0° Wire out : 430 m Speed : 3.3 km  
 Sorted : 340 Total catch: 398.99 Catch/hour: 787.47

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 13  
 DATE :27/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 35°15.39  
 start stop duration Lon E 18°40.04  
 TIME :04:28:04 04:58:26 30.4 (min) Purpose : 3  
 LOG : 319.44 321.08 1.6 Region : 6100  
 FDEPTH: 582 593 Gear cond.: 0  
 BDEPTH: 582 593 Validity : 0  
 Towing dir: 0° Wire out : 1160 m Speed : 3.2 km  
 Sorted : 150 Total catch: 149.51 Catch/hour: 295.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	207.24	324	26.32	143
Merluccius capensis	144.08	249	18.30	142
Chelidonichthys capensis	130.26	264	16.54	128
Parapagurus dimorphus	49.74	5526	6.32	
Brown sand dollar	35.92	539	4.56	
Lophius vomerinus	33.55	39	4.26	129
Etrumeus whiteheadi	31.09	537	3.95	
Chelidonichthys queketti	19.74	73	2.51	130
Raja straeleni	17.76	14	2.26	
Raja pullopectata	16.78	6	2.13	
Holohalaelurus regani	13.82	34	1.75	
Merluccius paradoxus	11.84	30	1.50	136
Sepia australis	8.98	815	1.14	
Merluccius capensis	8.49	20	1.08	144
Mustelus palumbes	7.89	6	1.00	
Squalus megalops	6.51	14	0.83	
Loligo reynaudi	5.60	48	0.71	139
Paracallionymus costatus	5.18	1299	0.66	
Todaropsis eblanae	4.56	138	0.58	138
Loligo reynaudi	4.28	35	0.54	140
SALPS	3.73	6	0.47	
Starfish red (pentagon)	2.80	103	0.36	
Merluccius capensis	2.69	193	0.34	141
Genypterus capensis	1.97	12	0.25	131
Thyrsites atun	1.97	2	0.25	132
Trachurus capensis	1.87	35	0.24	137
Helicolenus dactylopterus	1.82	20	0.23	133
Zeus capensis	1.66	130	0.21	134
Cynoglossus zanzibarensis	1.38	35	0.18	135
Holohalaelurus punctatus	1.24	6	0.16	
Starfish	0.73	34	0.09	
Giant bullia gastropod	0.69	28	0.09	
Ophichthus bennettai	0.55	8	0.07	
Lepidopus caudatus	0.48	6	0.06	
Nudibranchs	0.42	55	0.05	
Olivaceae	0.06	8	0.01	
Rochinia sp.	0.06	8	0.01	
Champsodon capensis	0.03	8	0.00	
Total	787.47		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	118.54	93	40.13	161
Chaceon maritae	47.42	237	16.05	
Coelorinchus simorhynchus	33.59	466	11.37	
Anemones, pink	17.78	93	6.02	
Coelorinchus braueri	13.24	778	4.48	
Lophius vomerinus	11.46	2	3.88	159
Merluccius paradoxus	8.69	8	2.94	160
Hydrolagus africanus	7.90	6	2.68	
Genypterus capensis	5.93	2	2.01	158
Starfish - many arms	4.15	5186	1.40	
Starfish - fleshy	3.95	6	1.34	
Squalus mitsukurii	3.95	2	1.34	
S H R I M P S	3.08	616	1.04	
Helicolenus dactylopterus	2.37	14	0.80	162
Bassanago albescens	1.98	6	0.67	
Raja leopardus	1.88	8	0.64	
Starfish	1.28	111	0.43	
Photichthys argenteus	1.22	43	0.41	
Nezumia sp.	0.90	231	0.31	
Notacanthus sexspinis	0.83	10	0.28	
Raja confundens	0.71	2	0.24	
Etmopterus brachyurus	0.67	2	0.23	
Malacocephalus laevis	0.65	2	0.22	
Lucigadus ori	0.63	43	0.21	
Starfish red (pentagon)	0.49	14	0.16	
Rossia enigmatica	0.32	10	0.11	
Starfish white 5 arms	0.31	12	0.11	
Bristle worms (straws)	0.26	65	0.09	
Bathypolypus valdiviae	0.20	4	0.07	
Cubiceps capensis	0.17	2	0.06	
Tripteryphycis gilchristi	0.11	2	0.04	
Funchalia woodwardi	0.09	6	0.03	
Whelks	0.08	2	0.03	
Chauliodus sloani	0.08	6	0.03	
Persparsia kopua	0.08	2	0.03	
Stoloteuthis sp.	0.06	16	0.02	
Lepidion capensis	0.05	6	0.02	
Symbolophorus boops	0.04	10	0.01	
Pasiphaea sp.	0.04	14	0.01	
Physiculus capensis	0.04	2	0.01	
Psychrolutes macrocephalus	0.03	4	0.01	
Hoplostethus mediterraneus	0.03	16	0.01	
Lampanyctodes hectoris	0.03	18	0.01	
Myctophum sp.	0.02	8	0.01	
Janthina sp.	0.01	2	0.00	
Rochinia sp.	0.01	2	0.00	
Gastropod nei	0.01	4	0.00	
Diretmus argenteus	0.01	2	0.00	
Paraliparis sp.	0.01	4	0.00	
Cirripedia	0.00	2	0.00	
Total	295.38		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 12  
 DATE :26/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 35°3.42  
 start stop duration Lon E 19°35.71  
 TIME :16:12:34 16:43:11 30.6 (min) Purpose : 3  
 LOG : 260.86 262.51 1.7 Region : 6100  
 FDEPTH: 151 151 Gear cond.: 0  
 BDEPTH: 151 151 Validity : 0  
 Towing dir: 0° Wire out : 375 m Speed : 3.2 km  
 Sorted : 189 Total catch: 189.41 Catch/hour: 371.16

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 14  
 DATE :27/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 35°0.36  
 start stop duration Lon E 18°28.57  
 TIME :08:17:47 08:19:25 1.7 (min) Purpose : 3  
 LOG : 342.23 342.33 0.1 Region : 6100  
 FDEPTH: 562 561 Gear cond.: 0  
 BDEPTH: 562 561 Validity : 0  
 Towing dir: 0° Wire out : 1130 m Speed : 3.6 km  
 Sorted : 234 Total catch: 233.95 Catch/hour: 8507.27

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	137.17	341	36.96	149
Chelidonichthys capensis	133.25	296	35.90	145
Raja straeleni	16.07	10	4.33	
Callorhynchus capensis	15.68	8	4.22	
Galeorhinus galeus	11.76	2	3.17	
Genypterus capensis	9.80	55	2.64	146
Lophius vomerinus	6.27	10	1.69	147
Zeus capensis	5.09	57	1.37	156
Merluccius capensis	4.27	106	1.15	154
Cynoglossus zanzibarensis	3.80	88	1.02	151
Etrumeus whiteheadi	3.53	84	0.95	
Brown sand dollar	3.19	41	0.86	
Loligo reynaudi	2.94	18	0.79	153
Nudibranchs	2.33	333	0.63	
Sepia australis	2.33	180	0.63	
Merluccius capensis	2.08	259	0.56	155
Starfish red (pentagon)	1.76	51	0.48	
Loligo reynaudi	1.61	14	0.43	152
Todaropsis eblanae	1.31	71	0.35	157
Trachurus capensis	1.29	31	0.35	150
Paracallionymus costatus	1.06	265	0.29	
Pterygosquilla armata capensis	1.04	61	0.28	
Parapagurus dimorphus	1.02	255	0.27	
Chelidonichthys queketti	0.98	10	0.26	148
Starfish	0.86	0	0.23	
Engraulis capensis	0.18	12	0.05	
Starfish - many arms	0.14	16	0.04	
Sepia hieronis	0.12	2	0.03	
Exodromidia sp.	0.12	8	0.03	
Lepidopus caudatus	0.05	2	0.01	
Raja sp.	0.04	2	0.01	
Sepia typica	0.02	4	0.00	
Helicolenus dactylopterus	0.01	2	0.00	
Total	371.16		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	4618.18	3673	54.29	164
Coelorinchus simorhynchus	1432.73	17927	16.84	
Squalus mitsukurii	454.55	109	5.34	
Chaceon maritae	443.64	2327	5.21	
Lophius vomerinus	320.00	145	3.76	163
Coelorinchus braueri	294.55	22655	3.46	
Anemones, pink	172.36	582	2.03	
Bassanago albescens	134.55	327	1.58	
Helicolenus dactylopterus	129.45	727	1.52	166
Raja leopardus	112.73	36	1.33	
Merluccius paradoxus	109.09	109	1.28	165
Psychrolutes macrocephalus	49.45	909	0.58	
Starfish - many arms	32.73	32727	0.38	
Starfish - fleshy	29.09	291	0.34	
Raja confundens	25.45	73	0.30	
Etmopterus sp.	23.27	36	0.27	
Whelks	20.00	473	0.24	
Raja leopardus	17.24	145	0.20	0
Lepidion capensis	12.07	145	0.14	
Starfish white 5 arms	10.47	727	0.12	
Solenocera sp.	10.07	1782	0.12	
Tripteryphycis gilchristi	8.36	327	0.10	
Nezumia sp.	5.31	1382	0.06	
Lucigadus ori	4.62	364	0.05	
Notacanthus sexspinis	4.58	36	0.05	
Rossia enigmatica	4.58	109	0.05	
Munidopsis sp.	3.71	1091	0.04	
Bathophilus sp.	3.64	73	0.04	
Ophichthus bennettai	3.27	36	0.04	
Parapagurus pilosimanus	2.04	109	0.02	
Starfish yellow/orange	2.00	218	0.02	
Gymnoscopelus sp.	1.89	727	0.02	
Bristle worms (straws)	1.24	436	0.01	
Bathypolypus valdiviae	1.24	36	0.01	
Symbolophorus boops	1.24	145	0.01	
Starfish red (pentagon)	1.13	36	0.01	
Cubiceps capensis	1.13	36	0.01	
Chauliodus sloani	0.98	109	0.01	
Haliporoides triarthrus	0.96	36	0.01	
Lycoteuthis lorigera	0.95	36	0.01	
Myctophum sp.	0.62	218	0.01	
Shark eggs	0.44	36	0.01	
Stoloteuthis sp.	0.44	109	0.01	
Paracallionymus costatus	0.44	73	0.01	
Diaphus sp.	0.29	73	0.00	
Hoplostethus mediterraneus	0.22	109	0.00	
Oreosoma atlanticum	0.15	36	0.00	
Diretmus argenteus	0.11	36	0.00	
Paraliparis sp.	0.04	36	0.00	
Total	8507.27		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 15

DATE :27/01/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 34°49.70 Lon E 18°25.42  
 start stop duration Purpose : 3  
 TIME :10:11:43 10:32:25 20.7 (min) Region : 6100  
 LOG : 353.75 354.89 1.1 Gear cond.: 0  
 FDEPTH: 347 350 Validity: 0  
 BDEPTH: 347 350 Speed : 3.3 km  
 Towing dir: 0° Wire out : 860 m Catch/hour: 1105.17  
 Sorted : 381 Total catch: 381.28

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Merluccius paradoxus	730.43	66.09	167
Coelorrhinchus simorhynchus	211.59	19.15	
Lophius vomerinus	49.28	4.46	168
Merluccius capensis	26.67	2.41	173
Merluccius capensis	12.46	1.13	172
Helicolenus dactylopterus	11.59	1.05	174
Genypterus capensis	8.70	0.79	169
Todaropsis eblanae	7.83	0.71	176
Brama brama	6.96	0.63	170
Malacocephalus laevis	6.96	0.63	
Paracallionymus costatus	5.80	0.52	
Todaropsis eblanae	4.35	0.39	175
Squalus mitsukurii	3.88	0.35	
Zeus capensis	3.36	0.30	171
Raja straeleni	2.90	0.26	
Raja leopardus	2.03	0.18	
Chaceon maritae	1.51	0.14	
Raja confundens	1.45	0.13	
Anemones, pink	1.28	0.12	
Starfish white 5 arms	1.26	0.11	
Olivaceae	0.74	0.07	
Starfish red (pentagon)	0.44	0.04	
Coelorrhinchus braueri	0.41	0.04	
Parapagurus dimorphus	0.39	0.04	
Whelks	0.36	0.03	
Exodromidia sp.	0.30	0.03	
Starfish yellow/orange	0.26	0.02	
Raja leopardus	0.24	0.02	0
Parapagurus pilosimanus	0.23	0.02	
Giant bullia gastropod	0.22	0.02	
Bathypolypus valdiviae	0.17	0.02	
Histioteuthis macrohista	0.17	0.02	
Olivaceae	0.17	0.01	0
Lepidopus caudatus	0.15	0.01	
Gastropod nei	0.14	0.01	
Pterygossquilla armata capensis	0.12	0.01	
Cynoglossus zanzibarensis	0.09	0.01	177
Sepia sp. New SA	0.06	0.01	
Rossia sp.	0.06	0.01	
Physiculus capensis	0.06	0.01	
Cone gastropod	0.04	0.00	
Lucigadus orii	0.03	0.00	
Mursia cristimanus	0.03	0.00	
Munidopsis sp.	0.01	0.00	
Total	1105.17	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 16  
 DATE :27/01/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 34°52.13 Lon E 18°34.70  
 start stop duration Purpose : 3  
 TIME :12:20:41 12:51:30 30.8 (min) Region : 6100  
 LOG : 365.86 367.44 1.6 Gear cond.: 0  
 FDEPTH: 223 226 Validity: 0  
 BDEPTH: 223 226 Speed : 3.1 km  
 Towing dir: 0° Wire out : 550 m Catch/hour: 2355.64  
 Sorted : 431 Total catch: 1210.02

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 18  
 DATE :27/01/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 34°37.76 Lon E 18°55.98  
 start stop duration Purpose : 3  
 TIME :17:11:28 17:41:48 30.4 (min) Region : 6100  
 LOG : 396.58 398.02 1.4 Gear cond.: 0  
 FDEPTH: 144 142 Validity: 0  
 BDEPTH: 144 142 Speed : 2.9 km  
 Towing dir: 0° Wire out : 350 m Catch/hour: 1388.85  
 Sorted : 362 Total catch: 702.53

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Etrumeus whiteheadi	781.88	56.30	
Chelidonicichthys capensis	225.37	16.23	215
Trachurus capensis	129.39	9.32	219
Merluccius capensis	112.69	8.11	218
Callorhinchus capensis	47.45	3.42	
Lophius vomerinus	41.52	2.99	216
Raja straeleni	13.84	1.00	
Cynoglossus zanzibarensis	6.37	0.46	221
Todaropsis eblanae	4.29	0.31	222
Pterygossquilla armata capensis	4.22	0.30	
Engraulis capensis	3.04	0.22	
Starfish red (pentagon)	2.84	0.20	
Palinurus gilchristi	2.77	0.20	214
Sepia australis	2.35	0.17	
Genypterus capensis	1.98	0.14	217
Helicolenus dactylopterus	1.94	0.14	220
Brown sand dollar	1.87	0.13	
Paracallionymus costatus	1.25	0.09	
Loligo reynaudi	0.99	0.07	224
Merluccius capensis	0.76	0.05	223
Starfish yellow/orange	0.69	0.05	
Mursia cristimanus	0.59	0.04	
Mudibranchs	0.47	0.03	
Exodromidia sp.	0.11	0.01	
Rochinia sp.	0.08	0.01	
Starfish - many arms	0.07	0.00	
Olivaceae	0.06	0.00	
Total	1388.85	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Parapagurus dimorphus	1547.70	65.70	
Merluccius capensis	165.48	7.02	189
Helicolenus dactylopterus	161.58	6.86	178
Merluccius paradoxus	87.99	3.74	191
Merluccius paradoxus	68.14	2.89	193
Merluccius capensis	63.27	2.69	188
Lophius vomerinus	42.83	1.82	179
Galeorhinus galeus	25.31	1.07	
Lepidopus caudatus	20.91	0.89	
Mustelus palumbes	20.44	0.87	
Paracallionymus costatus	18.11	0.77	
Chelidonicichthys capensis	15.57	0.66	180
Callorhinchus capensis	14.80	0.63	
Trachurus capensis	14.41	0.61	185
Brama brama	13.63	0.58	181
Todaropsis eblanae	12.65	0.54	194
Squalus megalops	11.49	0.49	
Raja straeleni	9.73	0.41	
Todaropsis eblanae	7.79	0.33	195
Merluccius paradoxus	6.23	0.26	192
Merluccius capensis	5.06	0.21	190
Sepia australis	3.50	0.15	
Raja pullopectata	2.92	0.12	
Genypterus capensis	2.92	0.12	182
Zeus capensis	2.53	0.11	184
Holohalaelurus punctatus	2.26	0.10	
Merluccius paradoxus	2.10	0.09	187
Cynoglossus zanzibarensis	1.67	0.07	186
Thyrsites atun	1.56	0.07	183
Anemones, white	0.74	0.03	
Holohalaelurus regani	0.70	0.03	
Coelorrhinchus simorhynchus	0.58	0.02	
Loligo reynaudi	0.32	0.01	197
Emmelichthys nitidus	0.29	0.01	
Etrumeus whiteheadi	0.14	0.01	
Congiopodus spinifer	0.10	0.00	
Plagiogeneion rubignous	0.04	0.00	
Champsodon capensis	0.04	0.00	
Lophius vomerinus	0.04	0.00	196
Rochinia sp.	0.04	0.00	
Physiculus capensis	0.03	0.00	
Total	2355.64	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 19  
 DATE :28/01/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 34°48.06 Lon E 18°15.06  
 start stop duration Purpose : 3  
 TIME :04:36:08 05:06:32 30.4 (min) Region : 6100  
 LOG : 458.43 459.85 1.4 Gear cond.: 0  
 FDEPTH: 585 568 Validity: 0  
 BDEPTH: 585 568 Speed : 2.8 km  
 Towing dir: 0° Wire out : 1200 m Catch/hour: 165.93  
 Sorted : 84 Total catch: 84.07

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Merluccius paradoxus	67.11	40.44	226
Coelorrhinchus braueri	53.29	32.12	
Merluccius paradoxus	25.66	15.46	225
Chaceon maritae	6.51	3.93	
Psychrolutes macrocephalus	2.50	1.51	
Notacanthus sexspinis	2.25	1.36	
Starfish - fleshy	1.64	0.99	
Whelks	1.58	0.95	
Nezumia sp.	0.87	0.52	
Helicolenus dactylopterus	0.77	0.46	227
Plesionika martia	0.73	0.44	
Synapobranchius sp.	0.59	0.36	
Kuronezumia leonis	0.36	0.22	
Tripterophycis gilchristi	0.34	0.20	
Todaropsis eblanae	0.30	0.18	229
Rossia enigmatica	0.24	0.15	
Todaropsis eblanae	0.24	0.14	228
Myxine sp.	0.16	0.10	
Starfish red (pentagon)	0.14	0.09	
Raja leopardus	0.12	0.07	
Starfish yellow/orange	0.08	0.05	
Diaphus efulgens	0.08	0.05	
Bristle worms (straws)	0.07	0.04	
Bathypolypus valdiviae	0.07	0.04	
Mursia cristimanus	0.05	0.03	
Leptocephalus	0.03	0.02	
Rochinia sp.	0.03	0.02	
Cranchia scabra	0.02	0.01	
Chaunax pictus	0.02	0.01	
Starfish - many arms	0.02	0.01	
C R A B S	0.02	0.01	
Symblophorus boops	0.02	0.01	
Lepidion capensis	0.01	0.00	
Hoplostethus mediterraneus	0.01	0.00	
Stoloteuthis sp.	0.00	0.00	
Starfish	0.00	0.00	
Paraliparis sp.	0.00	0.00	
Total	165.93	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 17  
 DATE :27/01/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 34°46.83 Lon E 18°46.45  
 start stop duration Purpose : 3  
 TIME :14:44:40 15:14:33 29.9 (min) Region : 6100  
 LOG : 380.92 382.58 1.7 Gear cond.: 0  
 FDEPTH: 177 178 Validity: 0  
 BDEPTH: 177 178 Speed : 3.3 km  
 Towing dir: 0° Wire out : 450 m Catch/hour: 386.89  
 Sorted : 193 Total catch: 192.74

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Lophius vomerinus	130.48	33.73	198
Merluccius capensis	42.15	10.90	205
Chelidonicichthys capensis	32.12	8.30	200
Merluccius capensis	31.11	8.04	203
Trachurus capensis	30.11	7.78	206
Callorhinchus capensis	28.91	7.47	
Merluccius capensis	22.08	5.71	204
Raja straeleni	20.07	5.19	
Coelorrhinchus simorhynchus	5.54	1.43	
URCHINS	5.54	1.43	

R/V Dr.	Fridtjof Nansen	SURVEY:2012401	STATION: 20
DATE :	28/01/2012	GEAR TYPE: BT NO: 21	POSITION:Lat S 34°40.78
TIME :	06:37:30	start stop duration	Purpose : 3
LOG :	469.91	07:07:33 30.1 (min)	Region : 6100
FDEPTH:	482	482	Gear cond.: 0
BDEPTH:	482	482	Validity : 0
Towing dir:	0°	Wire out : 1030 m	Speed : 3.1 km
Sorted :	545	Total catch: 545.15	Catch/hour: 1088.49
SPECIES			CATCH/HOUR % OF TOT. C SAMP
	weight	numbers	
Merluccius paradoxus	575.04	3153	52.83 230
Merluccius paradoxus	175.71	254	16.14 231
Merluccius paradoxus	143.76	134	13.21 232
Coelorinchus simorhynchus	95.84	1597	8.80
Lophius vomerinus	63.89	26	5.87 233
Helicolenus dactylopterus	6.39	48	0.59 234
Anemones, pink	5.45	52	0.50
Todaropsis eblanae	3.35	18	0.31 238
Genypterus capensis	3.19	2	0.29 235
Parapagurus pilosimanus	2.50	104	0.23
Coelorinchus braueri	2.00	106	0.18
Lucigadus ori	1.80	164	0.17
Todaropsis eblanae	1.48	12	0.14 237
Bassanago albescens	1.36	2	0.12
Whelks	1.31	36	0.12
Merluccius paradoxus	0.84	16	0.08 236
Malacocephalus laevis	0.72	4	0.07
Raja leopardus	0.49	10	0.05
Bathypolypus valdiviae	0.39	8	0.04
Starfish - fleshy	0.34	2	0.03
Rossia enigmatica	0.31	8	0.03
Paracallionymus costatus	0.28	32	0.03
Starfish white 5 arms	0.26	16	0.02
Anemones, white	0.23	4	0.02
Tripteryophycis gilchristi	0.22	22	0.02
Starfish yellow/orange	0.20	10	0.02
Gastropod nei	0.19	78	0.02
Psychrolutes macrocephalus	0.15	20	0.01
Starfish red (pentagon)	0.13	4	0.01
Starfish - many arms	0.13	12	0.01
Anemones, red	0.08	8	0.01
Stereomastis sp.	0.07	10	0.01
Olivaceae	0.05	22	0.00
Sea pens	0.04	2	0.00
Gymnoscoelus sp.	0.04	12	0.00
Photichthys argenteus	0.03	2	0.00
C R A B S	0.03	2	0.00
Scombrops boops	0.03	2	0.00
Cubiceps capensis	0.03	2	0.00
Shark eggs	0.03	4	0.00
Plesionika martia	0.03	4	0.00
Bristle worms (straws)	0.02	4	0.00
Rochinia sp.	0.02	6	0.00
Myctophum sp.	0.02	6	0.00
Physiculus capensis	0.01	2	0.00
Aphrodite pol	0.01	2	0.00
Hoplostethus mediterraneus	0.00	2	0.00
Total	1088.49		100.00

R/V Dr.	Fridtjof Nansen	SURVEY:2012401	STATION: 23
DATE :	28/01/2012	GEAR TYPE: BT NO: 21	POSITION:Lat S 34°22.73
TIME :	14:45:06	start stop duration	Purpose : 3
LOG :	515.22	15:04:36 19.5 (min)	Region : 6100
FDEPTH:	83	84	Gear cond.: 0
BDEPTH:	83	84	Validity : 0
Towing dir:	0°	Wire out : 220 m	Speed : 2.8 km
Sorted :	309	Total catch: 6000.00	Catch/hour: 18461.54
SPECIES			CATCH/HOUR % OF TOT. C SAMP
	weight	numbers	
Etrumeus whiteheadi	15094.77	279523	81.76
Jasus lalandii	2088.22	14320	11.31 266
Jasus lalandii	656.31	4357	3.56 267
Trachurus capensis	268.49	19689	1.45 265
Merluccius capensis	96.65	1609	0.52 270
Raja straeleni	84.71	58	0.46
Chelidonichthys capensis	79.35	178	0.43 268
Sardinops ocellatus	53.11	1132	0.29
Callorhynchus capensis	28.65	120	0.16
Cynoglossus zanzibarensis	9.54	60	0.05 269
Engraulis capensis	1.78	535	0.01
Total	18461.57		100.00

R/V Dr.	Fridtjof Nansen	SURVEY:2012401	STATION: 24
DATE :	29/01/2012	GEAR TYPE: BT NO: 21	POSITION:Lat S 34°36.66
TIME :	05:27:18	start stop duration	Purpose : 3
LOG :	583.05	05:58:39 31.4 (min)	Region : 6100
FDEPTH:	574	579	Gear cond.: 0
BDEPTH:	574	579	Validity : 0
Towing dir:	0°	Wire out : 1200 m	Speed : 2.6 km
Sorted :	144	Total catch: 143.55	Catch/hour: 274.65
SPECIES			CATCH/HOUR % OF TOT. C SAMP
	weight	numbers	
Merluccius paradoxus	112.88	103	41.10 271
Coelorinchus braueri	49.74	1464	18.13
Merluccius paradoxus	28.70	36	10.45 272
Anemones, pink	22.96	165	8.36
Chaecoon macphersoni	22.96	209	8.36
Malacocephalus laevis	11.48	34	4.18
Onmastrephes bartrami	8.61	2	3.13 275
Lophius vomerinus	4.97	4	1.81 274
Helicolenus dactylopterus	3.39	13	1.23 276
Genypterus capensis	3.25	2	1.18 273
Psychrolutes macrocephalus	2.32	11	0.84
Starfish - many arms	0.77	957	0.28
Bristle worms (straws)	0.63	136	0.23
Trachyscorpia eschmeyeri	0.40	10	0.15
Nettastoma parviceps	0.23	2	0.08
Myxine capensis	0.19	4	0.07
Tripteryophycis gilchristi	0.16	6	0.06
Ophichthus bennettii	0.16	2	0.06
Coelorinchus matamua	0.16	4	0.06
Photichthys argenteus	0.14	2	0.05
Whelks	0.13	2	0.05
Lepidion capensis	0.11	8	0.04
Lucigadus ori	0.09	6	0.03
Coelorinchus simorhynchus	0.05	2	0.02
Physiculus capensis	0.04	2	0.02
Shark eggs	0.04	2	0.01
Symblophorus boops	0.04	2	0.01
Diaphus sp.	0.01	4	0.00
Plesionika martia	0.01	4	0.00
Stoloteuthis sp.	0.01	2	0.00
Hoplostethus mediterraneus	0.00	2	0.00
Paraliparis sp.	0.00	2	0.00
Munidopsis sp.	0.00	2	0.00
Total	274.65		100.00

R/V Dr.	Fridtjof Nansen	SURVEY:2012401	STATION: 25
DATE :	29/01/2012	GEAR TYPE: BT NO: 21	POSITION:Lat S 34°33.36
TIME :	07:27:39	start stop duration	Purpose : 3
LOG :	592.41	07:58:38 31.0 (min)	Region : 6100
FDEPTH:	432	425	Gear cond.: 0
BDEPTH:	432	425	Validity : 0
Towing dir:	0°	Wire out : 1030 m	Speed : 2.7 km
Sorted :	527	Total catch: 1507.90	Catch/hour: 2920.40
SPECIES			CATCH/HOUR % OF TOT. C SAMP
	weight	numbers	
Merluccius paradoxus	1618.56	0	55.42 277
Helicolenus dactylopterus	485.57	3505	16.63 278
Merluccius paradoxus	213.04	186	7.29 281
Coelorinchus simorhynchus	183.44	5396	6.28
Bassanago albescens	122.01	167	4.18
Merluccius paradoxus	52.29	68	1.79 280
Merluccius capensis	52.29	27	1.79 279
Genypterus capensis	46.48	0	1.59
Octopus magnificus	33.89	12	1.16
Malacocephalus laevis	17.43	12	0.60
Lophius vomerinus	14.33	6	0.49
Lepidopus caudatus	13.75	17	0.47
Todaropsis eblanae	11.98	76	0.41 283
Holohalaelurus regani	10.65	29	0.36
Anemones, D.W.	10.07	107	0.34
Brama brama	8.33	8	0.29
Todaropsis eblanae	6.15	43	0.21 282
Merluccius capensis	5.62	4	0.19 278
Whelks	4.32	97	0.15
Parapagurus pilosimanus	3.39	155	0.12
Lucigadus ori	1.56	139	0.05
Starfish - many arms	1.18	207	0.04
Anemones, white	1.08	21	0.04
Starfish yellow/orange	0.59	21	0.02
Anemones, red	0.57	12	0.02
Paracallionymus costatus	0.49	64	0.02
Gastropod nei	0.43	87	0.01
C R A B S	0.34	12	0.01
Starfish white 5 arms	0.27	43	0.01
Olivaceae	0.26	91	0.01
Stereomastis sp.	0.04	12	0.00
Total	2920.40		100.00

R/V Dr.	Fridtjof Nansen	SURVEY:2012401	STATION: 22
DATE :	28/01/2012	GEAR TYPE: BT NO: 21	POSITION:Lat S 34°31.59
TIME :	11:23:09	start stop duration	Purpose : 3
LOG :	495.46	11:53:23 30.2 (min)	Region : 6100
FDEPTH:	177	176	Gear cond.: 0
BDEPTH:	177	176	Validity : 0
Towing dir:	0°	Wire out : 440 m	Speed : 3.0 km
Sorted :	1342	Total catch: 1342.22	Catch/hour: 2664.02
SPECIES			CATCH/HOUR % OF TOT. C SAMP
	weight	numbers	
Jasus lalandii	1192.85	5341	44.78 253
Chelidonichthys capensis	1006.29	2908	37.77 253
Merluccius paradoxus	188.55	822	7.08 252
Merluccius capensis	75.42	212	2.83 257
Merluccius paradoxus	67.48	349	2.53 256
Callorhynchus capensis	33.74	24	1.27 255
Lophius vomerinus	19.05	24	0.72 255
Trachurus capensis	11.51	206	0.43 259
Jasus lalandii	10.92	69	0.41 251
Raja straeleni	10.72	58	0.40
Thyrsites atum	8.93	12	0.34 254
Todaropsis eblanae	5.36	117	0.20 262
Starfish - many arms	4.76	159	0.18
Loligo reynaudi	4.11	8	0.15 263
Zeus capensis	3.97	81	0.15 261
Rochinia sp.	3.59	129	0.13 258
Cynoglossus zanzibarensis	3.57	67	0.13 258
Anemones, red	3.06	42	0.11
Sepia australis	2.64	202	0.10



R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 26		R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 29			
DATE	start stop duration	GEAR TYPE:	BT NO:	21	POSITION:Lat	S 34°28.75	DATE	start stop duration	GEAR TYPE:	BT NO:	6	POSITION:Lat	S 34°16.58
	09:46:16 09:59:53 13.6 (min)				Lon	E 18°1.51		15:34:27 16:04:36 30.2 (min)				Lon	E 18°13.94
LOG	: 603.11 603.83 0.7	Purpose	:	3	Region	: 6100	LOG	: 631.54 632.85 1.3	Purpose	:	3	Region	: 6100
FDEPTH:	312 312	Gear cond.:	:	0	Validity	: 0	FDEPTH:	171 168	Gear cond.:	:	0	Validity	: 0
BDEPTH:	312 312	Speed	:	3.2 km	Catch/hour:	1048.78	BDEPTH:	171 168	Speed	:	2.6 km	Catch/hour:	8796.23
Towing dir:	0°	Wire out	:	750 m	Sorted	: 94	Towing dir:	0°	Wire out	:	470 m	Sorted	: 343
		Total catch:	:	238.07					Total catch:	:	4420.10		
SPECIES				CATCH/HOUR	% OF TOT. C	SAMP	SPECIES				CATCH/HOUR	% OF TOT. C	SAMP
	weight	numbers						weight	numbers				
Helicolenus dactylopterus	663.00	10956		63.22		291	Etrumeus whiteheadi	5572.14	111443		63.35		322
Coelorinchus simorhynchus	169.60	4242		16.17			Trachurus capensis	1874.43	101871		21.31		321
Merluccius paradoxus	66.08	419		6.30		288	Jasus landalii	988.66	3493		11.24		324
Lophius vomerinus	44.05	22		4.20		289	Genypterus capensis	107.85	308		1.23		325
Octopus magnificus	44.05	13		4.20			Merluccius capensis	95.01	283		1.08		
Whelks	15.26	401		1.46			Sardinops ocellatus	34.92	462		0.40		
Starfish - many arms	12.64	2009		1.21			Starfish - many arms	31.33	3262		0.36		
Todaropsis eblanae	11.56	185		1.10		292	Ascidians	25.68	1721		0.29		
Paracallionymus costatus	9.10	586		0.87			WASTE00	25.68	0		0.29		
Starfish yellow/orange	3.42	44		0.33			Callorhynchus capensis	9.76	26		0.11		
Starfish white 5 arms	2.99	322		0.29			Paracallionymus costatus	7.78	848		0.09		
Zeus capensis	1.76	4		0.17		290	Mursia cristimanus	6.91	975		0.08		
Anemones, white	1.76	18		0.17			Anemones, red	4.65	283		0.05		
Lepidodromia caudatus	0.79	4		0.08			Starfish red (pentagon)	3.00	52		0.03		
Starfish	0.62	18		0.06			Zeus capensis	1.90	26		0.02		323
Exodromidia sp.	0.48	62		0.05			Todaropsis eblanae	1.59	52		0.02		326
Mursia cristimanus	0.42	79		0.04			Sepia australis	1.34	78		0.02		
Rossia enigmatica	0.40	13		0.04			Starfish yellow/orange	1.21	52		0.01		
Anemones, red	0.30	18		0.03			Exodromidia sp.	1.08	52		0.01		
Starfish	0.25	18		0.02		0	Sponge bristled	0.74	26		0.01		
Physiculus capensis	0.22	13		0.02			Turitella	0.41	127		0.00		
Rochinia sp.	0.03	18		0.00			Champsodon capensis	0.18	26		0.00		
Total	1048.78			100.00			Total	8796.23			100.00		
R/V Dr. Fridtjof Nansen													
DATE :29/01/2012		SURVEY:2012401		STATION: 27		R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 30			
start stop duration		GEAR TYPE:		BT NO:		21		POSITION:Lat		S 34°22.16			
11:46:31 12:18:40 32.2 (min)								Lon		E 18°1.72			
LOG : 614.35 615.91 1.6		Purpose		:		3		Region		:		6100	
FDEPTH: 286 283		Gear cond.:		:		0		Validity		:		0	
BDEPTH: 286 283		Speed		:		2.9 km		Catch/hour:		1482.97			
Towing dir: 0°		Wire out		:		725 m		Sorted		: 261		Total catch: 794.62	
		Total catch:		:		794.62		Sorted		: 287		Total catch: 286.63	
SPECIES				CATCH/HOUR	% OF TOT. C	SAMP	SPECIES				CATCH/HOUR	% OF TOT. C	SAMP
	weight	numbers						weight	numbers				
Helicolenus dactylopterus	451.63	6685		30.45		295	Merluccius paradoxus	291.34	252		51.64		328
Parapagurus dimorphus	396.95	49620		26.77			Merluccius paradoxus	82.68	313		14.65		327
Trachurus capensis	164.23	957		11.07		294	Coelorinchus braueri	72.64	1154		12.87		
Merluccius paradoxus	153.03	1032		10.32		293	Merluccius paradoxus	32.28	45		5.72		329
Coelorinchus simorhynchus	84.91	1629		5.73			Anemones, pink	24.21	152		4.29		
Merluccius paradoxus	74.65	123		5.03		296	Chaeoon macphersoni	11.22	94		1.94		
Lophius vomerinus	26.31	17		1.77		302	Starfish - many arms	11.02	1224		1.95		
Merluccius capensis	21.28	19		1.43		298	Helicolenus dactylopterus	10.24	51		1.81		330
Thyrssites atun	16.05	11		1.08		305	Bassanago albescens	10.04	24		1.78		
Merluccius capensis	12.50	7		0.84		299	Plesionika martia	5.06	1053		0.90		
Brama brama	10.82	9		0.73		301	Coelorinchus simorhynchus	2.36	31		0.42		
Todaropsis eblanae	10.40	164		0.70		307	Raja confundens	2.34	6		0.41		
Raja confundens	9.52	28		0.64			Notacanthus sexspinis	1.70	26		0.30		
Paracallionymus costatus	9.44	780		0.64			Raja leopardus	1.37	6		0.24		
Merluccius paradoxus	8.49	27		0.57		308	Malacocephalus laevis	1.11	4		0.20		
Todaropsis eblanae	7.11	110		0.48		306	Ascidians	0.90	177		0.16		
Merluccius paradoxus	6.16	7		0.42		297	Lucigadus ori	0.87	75		0.15		
Whelks	2.74	82		0.18			Hoplostethus mediterraneus	0.73	6		0.13		
Starfish - many arms	2.74	233		0.18			Anemones, white	0.52	4		0.09		
Emmelichthys nitidus	2.54	7		0.17			Tripterocephalus gilchristi	0.30	10		0.05		
Loligo reynaudi	2.05	4		0.14		304	Photichthys argenteus	0.19	6		0.03		
Zeus capensis	1.87	2		0.13		303	Starfish white 5 arms	0.15	10		0.03		
Holohalaelurus regani	1.72	6		0.12			Myxine sp.	0.13	2		0.02		
Starfish white 5 arms	1.59	123		0.11			Whelks	0.12	2		0.02		
Giant bullia gastropod	1.37	123		0.09			Selachophidium guentheri	0.12	2		0.02		
Chelidonichthys capensis	1.23	2		0.08		300	Anemones, red	0.11	8		0.02		
Exodromidia sp.	1.10	82		0.07			Diaphus effulgens	0.08	2		0.01		
Mursia cristimanus	0.25	28		0.02			Funchalia woodwardi	0.06	4		0.01		
Rossia enigmatica	0.11	13		0.01			Starfish red (pentagon)	0.06	2		0.01		
Cone gastropod	0.10	13		0.01			Parapagurus pilosimanus	0.06	2		0.01		
Olivaceae	0.08	13		0.01			Trachyscorpia eschmeyerii	0.04	2		0.01		
							Mursia cristimanus	0.03	6		0.01		
Total	1482.97			100.00			Stereomastis sp.	0.03	4		0.01		
							Shark eggs	0.03	2		0.01		
R/V Dr. Fridtjof Nansen													
DATE :29/01/2012		SURVEY:2012401		STATION: 28		R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 31			
start stop duration		GEAR TYPE:		BT NO:		6		POSITION:Lat		S 34°17.93			
14:01:44 14:31:36 29.9 (min)								Lon		E 18°11.39			
LOG : 625.80 627.33 1.5		Purpose		:		3		Region		:		6100	
FDEPTH: 278 260		Gear cond.:		:		0		Validity		:		0	
BDEPTH: 278 260		Speed		:		3.1 km		Catch/hour:		4668.38			
Towing dir: 0°		Wire out		:		650 m		Sorted		: 331		Total catch: 2324.85	
		Total catch:		:		2324.85		Sorted		: 536		Total catch: 922.41	
SPECIES				CATCH/HOUR	% OF TOT. C	SAMP	SPECIES				CATCH/HOUR	% OF TOT. C	SAMP
	weight	numbers						weight	numbers				
Merluccius paradoxus	2705.82	18992		57.96		309	Merluccius paradoxus	602.77	2381		33.07		333
Coelorinchus simorhynchus	649.40	6494		13.91			Merluccius paradoxus	513.83	389		28.19		334
Merluccius paradoxus	402.01	649		8.61		314	Merluccius paradoxus	292.49	1156		16.04		
Parapagurus dimorphus	340.16	34016		7.29			Helicolenus dactylopterus	128.46	1008		7.05		331
Merluccius capensis	119.06	263		2.55		311	Coelorinchus simorhynchus	118.58	2964		6.50		
Callorhynchus capensis	117.51	46		2.52			Merluccius paradoxus	43.48	55		2.39		335
Thyrssites atun	77.31	46		1.66		310	Starfish - many arms	37.55	7510		2.06		
Carcharhinus obscurus	54.22	2		1.16			Anemones, pink	19.47	119		1.07		
Merluccius paradoxus	51.02	108		1.09		313	Coelorinchus braueri	16.90	850		0.93		
Chelidonichthys capensis	21.65	46		0.46		312	Octopus magnificus	11.86	2		0.65		
Whelks	18.55	618		0.40			WASTE00	8.30	0		0.46		
Raja confundens	17.94	30		0.38			Genypterus capensis	6.72	2		0.37		332
Trachurus capensis	14.38	185		0.31		315	Whelks	4.39	79		0.24		
Black sand dollar	13.30	108		0.28			Lucigadus ori	3.56	178		0.20		
Sea urchin	11.91	185		0.26			Notacanthus sexspinis	3.26	30		0.18		
Raja traeleni	7.43	2		0.16			Raja confundens	2.77	10		0.15		
Mustelus palumbes	6.43	2		0.14			Todaropsis eblanae	2.13	10		0.12		336
Starfish yellow/orange	5.60	104		0.12			Bassanago albescens	1.26	10		0.07		
Starfish - fleshy	5.26	16		0.11			Stereomastis sp.	1.25	188		0.07		
Holohalaelurus regani	3.40	30		0.07									

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 32 Hoplostethus mediterraneus 0.01 2 0.00  
 DATE :30/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 34°18.99  
 start stop duration Lon E 17°42.25  
 TIME :07:23:03 07:55:01 32.0 (min) Purpose : 3  
 LOG : 684.62 686.19 1.6 Region : 6100  
 FDEPTH: 450 450 Gear cond.: 0  
 BDEPTH: 450 450 Validity : 0  
 Towing dir: 0° Wire out : 910 m Speed : 2.9 km  
 Sorted : 310 Total catch: 1068.32 Catch/hour: 2004.98

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1279.01	5189	63.79	340
Merluccius paradoxus	264.62	265	13.20	342
Helicolenus dactylopterus	176.88	1021	8.82	341
Coelorinchus simorhynchus	138.79	2776	6.92	
Merluccius paradoxus	61.93	83	3.09	343
Starfish - many arms	20.41	3647	1.02	
Bassanago albescens	14.29	28	0.71	
Squalus mitsukurii	8.45	2	0.42	
Lophius vomerinus	8.07	4	0.40	337
Genypterus capensis	7.51	4	0.37	339
Anemones, pink	5.76	54	0.29	
Lucigadus ori	4.03	298	0.20	
Brama brama	3.00	2	0.15	338
Funchalia woodwardi	2.99	135	0.15	
Parapagurus pilosimanus	2.24	163	0.11	
Physiculus capensis	1.92	81	0.10	
Anemones, red	1.72	13	0.09	
Octopus vulgaris	1.39	2	0.07	
Paracallionymus costatus	0.68	83	0.03	
Tripterophycis gilchristi	0.56	54	0.03	
Starfish white 5 arms	0.19	28	0.01	
Stereomastis sp.	0.18	26	0.01	
Hoplostethus mediterraneus	0.14	137	0.01	
Epigonus telescopus	0.11	13	0.01	
Abraliopsis gilchristi	0.08	13	0.00	
Lampanyctodes hectoris	0.04	13	0.00	
Total	2004.98		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 33  
 DATE :30/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 34°18.22  
 start stop duration Lon E 17°44.50  
 TIME :08:49:04 09:19:23 30.3 (min) Purpose : 3  
 LOG : 689.67 691.22 1.6 Region : 6100  
 FDEPTH: 391 388 Gear cond.: 0  
 BDEPTH: 391 388 Validity : 0  
 Towing dir: 0° Wire out : 900 m Speed : 3.1 km  
 Sorted : 553 Total catch: 2878.15 Catch/hour: 5695.54

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	4318.73	22650	75.83	353
Merluccius paradoxus	449.21	283	7.89	351
Helicolenus dactylopterus	219.42	1603	3.85	352
Brama brama	209.76	218	3.68	344
Coelorinchus simorhynchus	191.56	5816	3.36	
Merluccius capensis	57.39	20	1.01	349
Malacocephalus laevis	53.64	105	0.94	
Merluccius paradoxus	53.43	57	0.94	350
Genypterus capensis	29.68	12	0.52	345
Starfish - many arms	29.26	0	0.51	
Anemones, white	19.50	105	0.34	
Parapagurus pilosimanus	18.81	766	0.33	
Giant bullia gastropod	9.75	243	0.17	
Merluccius capensis	8.11	4	0.14	348
Anemones, pink	7.66	69	0.13	
Todaropsis eblanae	6.37	36	0.11	
Thyrssites atun	5.94	2	0.10	346
Lepidion caudatus	3.56	4	0.06	
Rossia enigmatica	1.39	36	0.02	
Paracallionymus costatus	1.25	174	0.02	
Todarodes angolensis	1.11	2	0.02	347
Total	5695.54		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 34  
 DATE :30/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 33°53.60  
 start stop duration Lon E 17°26.18  
 TIME :12:41:14 13:11:11 29.9 (min) Purpose : 3  
 LOG : 720.78 722.18 1.4 Region : 6100  
 FDEPTH: 590 584 Gear cond.: 0  
 BDEPTH: 590 584 Validity : 0  
 Towing dir: 0° Wire out : 1430 m Speed : 2.8 km  
 Sorted : 233 Total catch: 232.97 Catch/hour: 466.88

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Coelorinchus braueri	160.32	1886	34.34	
Lepidion capensis	66.13	331	14.16	
Chaeceon macphersoni	48.10	39663	10.30	
Merluccius paradoxus	46.09	32	9.87	354
Bathyrhaja smithii	19.84	4	4.25	
Notacanthus sexspinis	18.04	112	3.86	
Nezumia sp.	17.03	162	3.65	
Etmopterus sp.	13.03	178	2.79	
Anemones, pink	12.02	100	2.58	
Bassanago albescens	9.42	26	2.02	
Merluccius paradoxus	9.22	46	1.97	357
Raja leoparden	5.41	2	1.16	
Bristle worms (straws)	4.89	699	1.05	
Raja confundens	4.81	26	1.03	
Helicolenus dactylopterus	4.01	34	0.86	358
Trachyscorpia eschmeyerii	3.75	28	0.80	
Histioteuthis miranda	2.85	2	0.61	
Eptatretus profundus	2.81	4	0.60	
Todarodes angolensis	2.57	2	0.55	356
Psychrolutes macrocephalus	2.18	10	0.47	
Starfish - many arms	2.10	351	0.45	
Kuronezumia leonis	1.97	16	0.42	
Merluccius paradoxus	1.64	2	0.35	355
Whelks	1.10	22	0.24	
Synaphobranchus sp.	1.03	10	0.22	
Starfish yellow/orange	0.88	14	0.19	
Etmopterus brachyurus	0.75	2	0.16	
Sergia sp.	0.73	110	0.16	
Starfish - fleshy	0.72	16	0.15	
Anemones, white	0.66	6	0.14	
Sea cucumber	0.41	2	0.09	
Coelorinchus sp.	0.31	2	0.07	
Plesionika martia	0.29	44	0.06	
PSEPIHAIIDAE	0.26	30	0.06	
Starfish white 5 arms	0.25	40	0.05	
Shark eggs	0.22	22	0.05	
Ophichthus bennettai	0.20	2	0.04	
Photichthys argenteus	0.19	4	0.04	
Raja leoparden	0.16	2	0.03	0
Merluccius paradoxus	0.13	20	0.03	359
Careproctus griseldea	0.06	2	0.01	
Gastropod nei	0.05	10	0.01	
Lepidion capensis	0.05	6	0.01	0
Gymnoscopelus sp.	0.04	2	0.01	
Funchalia woodwardi	0.04	2	0.01	
Symbolophorus boops	0.04	2	0.01	
Leptocephalus	0.03	2	0.01	
Rochinia sp.	0.02	4	0.00	
Anemones, red	0.01	4	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 35  
 DATE :30/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 33°50.93  
 start stop duration Lon E 17°27.99  
 TIME :14:16:53 14:47:33 30.7 (min) Purpose : 3  
 LOG : 726.82 728.34 1.5 Region : 6100  
 FDEPTH: 463 461 Gear cond.: 0  
 BDEPTH: 463 461 Validity : 0  
 Towing dir: 0° Wire out : 900 m Speed : 3.0 km  
 Sorted : 226 Total catch: 226.40 Catch/hour: 442.90

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	134.01	78	30.26	360
Coelorinchus simorhynchus	61.82	1405	13.96	
Notacanthus sexspinis	58.69	587	13.25	
Merluccius paradoxus	58.69	223	13.25	400
Bassanago albescens	52.82	67	11.93	
Helicolenus dactylopterus	12.52	65	2.83	362
Bathyrhaja smithii	12.52	2	2.83	
Octopus magnificus	12.13	2	2.74	
Anemones, pink	8.61	113	1.94	
Coelorinchus braueri	6.46	162	1.46	
Merluccius paradoxus	4.30	6	0.97	361
Plesionika martia	4.07	679	0.92	
Squalus mitsukurii	3.13	2	0.71	
Starfish - many arms	2.13	237	0.48	
Histioteuthis miranda	1.84	2	0.42	
Starfish - fleshy	1.45	4	0.33	
Etmopterus brachyurus	1.00	22	0.23	
Lucigadus ori	1.00	90	0.23	
Stereomastis sp.	0.74	123	0.17	
Paracallionymus costatus	0.68	98	0.15	
Whelks	0.62	12	0.14	
Psychrolutes macrocephalus	0.61	6	0.14	
Starfish white 5 arms	0.50	41	0.11	
Parapagurus pilosimanus	0.49	29	0.11	
Sergia sp.	0.48	86	0.11	
Anemones, white	0.33	4	0.08	
Merluccius paradoxus	0.23	37	0.05	363
Tripterophycis gilchristi	0.21	14	0.05	
Olivaceae	0.17	57	0.04	
Gastropod nei	0.12	39	0.03	
Funchalia woodwardi	0.10	6	0.02	
Rossia enigmatica	0.07	2	0.02	
Hoplostethus mediterraneus	0.06	41	0.01	
Rochinia sp.	0.05	14	0.01	
Exodromidia sp.	0.04	2	0.01	
Lampanyctodes hectoris	0.04	12	0.01	
Shark eggs	0.04	4	0.01	
Cone gastropod	0.03	4	0.01	
Physiculus capensis	0.03	2	0.01	
Diaphus sp.	0.02	6	0.01	
Epigonus telescopus	0.01	2	0.00	
Anemones, red	0.01	2	0.00	
Maurolicus muelleri	0.01	10	0.00	
Total	442.90		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 36  
 DATE :30/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 33°52.04  
 start stop duration Lon E 17°33.47  
 TIME :15:55:12 16:25:59 30.8 (min) Purpose : 3  
 LOG : 734.77 736.20 1.4 Region : 6100  
 FDEPTH: 313 320 Gear cond.: 0  
 BDEPTH: 313 320 Validity : 0  
 Towing dir: 0° Wire out : 700 m Speed : 2.8 km  
 Sorted : 185 Total catch: 810.65 Catch/hour: 1580.21

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Parapagurus dimorphus	536.06	48733	33.92	
Merluccius paradoxus	519.88	2470	32.90	370
Coelorinchus simorhynchus	146.20	4565	9.25	
Lophius vomerinus	120.86	60	7.65	364
Notacanthus sexspinis	87.72	910	5.55	
Helicolenus dactylopterus	38.50	472	2.44	371
Merluccius paradoxus	31.19	33	1.97	368
Paracallionymus costatus	14.95	1867	0.95	
Merluccius paradoxus	12.28	16	0.78	369
Merluccius capensis	11.70	6	0.74	367
Starfish yellow/orange	10.07	49	0.64	
Raja straeleni	9.94	6	0.63	
Genypterus capensis	9.91	32	0.63	372
Starfish - many arms	8.61	959	0.54	
Anemones, pink	4.39	16	0.28	
Trachurus capensis	4.22	16	0.27	373
Brama brama	2.73	4	0.17	365
Merluccius capensis	2.69	2	0.17	366
Whelks	2.66	49	0.17	
Holohalaelurus regani	1.17	4	0.07	
Lampanyctodes hectoris	1.04	326	0.07	
Scomberesox saurus	0.89	16	0.06	
Merluccius paradoxus	0.65	97	0.04	374
Physiculus capensis	0.62	82	0.04	
Lucigadus ori	0.47	49	0.03	
Exodromidia sp.	0.39	16	0.02	
Rossia enigmatica	0.24	16	0.02	
Gastropod nei	0.06	16	0.00	
Starfish white 5 arms	0.06	80	0.00	
Maurolicus muelleri	0.05	49	0.00	
Total	1580.21		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 37  
 DATE :31/01/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 34°6.42  
 start stop duration Lon E 17°48.59  
 TIME :04:23:17 04:53:35 30.3 (min) Purpose : 3  
 LOG : 799.68 801.15 1.5 Region : 6100  
 FDEPTH: 277 275 Gear cond.: 0  
 BDEPTH: 277 275 Validity : 0  
 Towing dir: 0° Wire out : 650 m Speed : 2.9 km  
 Sorted : 231 Total catch: 1642.84 Catch/hour: 3253.15

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	2500.00	19214	76.85	377
Parapagurus dimorphus	297.03	14133	9.13	
Coelorinchus simorhynchus	136.14	1907	4.18	
Merluccius capensis	79.21	75	2.43	379
Merluccius paradoxus	54.46	51	1.67	381
Lophius vomerinus	49.50	26	1.52	375
Helicolenus dactylopterus	43.81	618	1.35	378
Merluccius capensis	25.74	22	0.79	380
Holohalaelurus regani	15.84	26	0.49	
Merluccius paradoxus	13.86	3044	0.43	383
Paracallionymus costatus	10.89	1362	0.33	
Whelks	4.78	174	0.15	
Todaropsis eblanae	3.96	50	0.12	384
Todaropsis eblanae	3.47	50	0.11	385
Starfish red (pentagon)	3.42	50	0.11	
Merluccius paradoxus	2.77	4	0.09	382
Sea urchin	2.23	50	0.07	
Starfish - many arms	1.61	99	0.05	
Brama brama	1.19	2	0.04	376
Emmelichthys nitidus	0.99	2	0.03	

Nudibranchs	0.92	50	0.03	
Exodromidia sp.	0.67	26	0.02	
Mursia cristimanus	0.20	26	0.01	
Rochinia sp.	0.17	26	0.01	
Starfish white 5 arms	0.15	50	0.00	
Mauroliscus muelleri	0.15	99	0.00	
Total	3253.15		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 38  
DATE : 31/01/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°59.17  
start stop duration Lon E 17°59.89  
TIME : 06:33:21 07:04:20 31.0 (min) Purpose : 3  
LOG : 814.59 816.19 1.6 Region : 6100  
FDEPTH: 192 192 Gear cond.: 0  
BDEPTH: 192 192 Validity : 0  
Towing dir: 0° Wire out : 450 m Speed : 3.1 km  
Sorted : 119 Total catch: 699.57 Catch/hour: 1354.45

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
weight numbers			
Merluccius paradoxus	681.51	8519	50.32 395
Parapagurus dimorphus	404.65	36780	29.88
Lampyctodes hectoris	54.52	17591	4.03 0
Chelidonichthys capensis	53.24	124	3.93 386
Merluccius capensis	21.30	106	1.57 396
Coelorinchus simorhynchus	19.48	453	1.44
Lampyctodes hectoris	19.36	6246	1.43
Helicolenus dactylopterus	13.20	724	0.97 394
Callorhynchus capensis	9.29	6	0.69
Merluccius capensis	8.71	15	0.64 390
Brama brama	7.36	4	0.54 388
Paracallionymus costatus	6.60	660	0.49
Mauroliscus muelleri	5.81	5808	0.43
Starfish red (pentagon)	5.77	106	0.43
Merluccius paradoxus	5.32	618	0.39 397
Nudibranchs	4.49	490	0.33
J E L Y F I S H	4.11	0	0.30
Merluccius capensis	3.41	6	0.25 391
Cynoglossus zanzibarensis	3.19	64	0.24 398
Mustelus palumbes	2.94	2	0.22
Sepia hieronis	2.68	64	0.20
Sea urchin	2.32	21	0.17
Malacocephalus laevis	2.15	0	0.16
Merluccius paradoxus	2.13	4	0.16 387
Gnathopis capensis	1.92	21	0.14
Mursia cristimanus	1.51	106	0.11
Chelidonichthys queketti	1.28	6	0.09 389
Holohalaelurus regani	1.28	10	0.09
Lophius vomerinus	1.16	4	0.09 392
Exodromidia sp.	1.02	64	0.08
Loligo reynaudi	0.58	2	0.04 393
Starfish yellow/orange	0.58	21	0.04
Gastropod nei	0.32	85	0.02
Starfish - many arms	0.30	21	0.02
Starfish white 5 arms	0.28	85	0.02
Lophius vomerinus	0.23	43	0.02 399
Ascidians	0.23	21	0.02
Congiopodus spinifer	0.19	4	0.01
Total	1354.45		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 39  
DATE : 04/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°44.86  
start stop duration Lon E 17°39.59  
TIME : 04:32:04 05:01:48 29.7 (min) Purpose : 3  
LOG : 904.68 906.27 1.6 Region : 6100  
FDEPTH: 246 247 Gear cond.: 0  
BDEPTH: 246 247 Validity : 0  
Towing dir: 0° Wire out : 625 m Speed : 3.2 km  
Sorted : 240 Total catch: 1598.93 Catch/hour: 3225.81

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
weight numbers			
Merluccius paradoxus	2049.76	21553	63.54 404
Parapagurus dimorphus	694.01	63093	21.51
Coelorinchus simorhynchus	142.03	5463	4.40
Merluccius paradoxus	135.17	169	4.19 409
Merluccius paradoxus	49.63	71	1.54 408
Raja straeleni	31.47	12	0.98
Lophius vomerinus	28.24	12	0.88 401
Trachurus capensis	16.14	65	0.50 406
Chelidonichthys capensis	11.70	24	0.36 403
Callorhynchus capensis	10.09	4	0.31
Helicolenus dactylopterus	8.07	291	0.25 405
Lampyctodes hectoris	7.17	2239	0.22
Paracallionymus costatus	6.13	807	0.19
Holohalaelurus regani	6.05	18	0.19 407
Merluccius capensis	6.05	4	0.19
Starfish	5.75	97	0.18
Merluccius paradoxus	4.84	839	0.15 410
Todaropsis eblanae	3.23	32	0.10 411
Octopus magnificus	3.03	4	0.09
Lamp shell	2.32	323	0.07
Physiculus capensis	1.13	161	0.04
Genypterus capensis	1.01	2	0.03 402
Exodromidia sp.	0.81	65	0.03
Giant bullia gastropod	0.74	32	0.02
Mauroliscus muelleri	0.48	323	0.02
Starfish white 5 arms	0.39	129	0.01
Rochinia sp.	0.19	32	0.01
Lophius vomerinus	0.16	32	0.01 412
Total	3225.81		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 40  
DATE : 04/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°39.37  
start stop duration Lon E 17°50.10  
TIME : 06:43:21 07:13:10 29.8 (min) Purpose : 3  
LOG : 918.40 920.20 1.8 Region : 6100  
FDEPTH: 186 184 Gear cond.: 0  
BDEPTH: 186 184 Validity : 0  
Towing dir: 0° Wire out : 500 m Speed : 3.6 km  
Sorted : 69 Total catch: 299.21 Catch/hour: 602.04

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
weight numbers			
Merluccius paradoxus	346.08	9722	57.48 422
Paracallionymus costatus	48.29	4829	8.02
Chelidonichthys capensis	44.27	119	7.35 414
Pterygosquilla armata capensis	34.12	3412	5.67
Mauroliscus muelleri	15.61	9759	2.59
Todaropsis eblanae	12.07	129	2.01 424
Lampyctodes hectoris	10.78	3596	1.79
Olivaceae	9.66	1207	1.60
Lophius vomerinus	9.46	16	1.57 415
Merluccius capensis	8.85	48	1.47 425
Merluccius paradoxus	7.73	885	1.28 427
Heart urchin	6.10	193	1.01
Merluccius capensis	6.04	18	1.00 413
Sepia australis	5.47	354	0.91
Todaropsis eblanae	4.02	48	0.67 423
Thyrssites atun	3.62	2	0.60 416
Callorhynchus capensis	3.62	2	0.60
Merluccius paradoxus	3.22	10	0.53 417
Starfish	2.83	48	0.47
Whelks	2.43	48	0.40

Starfish white 5 arms	2.35	322	0.39	
Helicolenus dactylopterus	1.93	64	0.32	426
Spatangus capensis	1.74	16	0.29	
Parapagurus dimorphus	1.72	145	0.29	
Lepidopus caudatus	1.63	97	0.27	
Zeus capensis	1.35	16	0.22	429
Etrumeus whiteheadi	1.18	32	0.20	
Cynoglossus zanzibarensis	1.01	14	0.17	419
Squalus megalops	1.01	2	0.17	
Giant bullia gastropod	0.87	32	0.14	
Trachurus capensis	0.72	2	0.12	420
Olivaceae	0.52	64	0.09	0
Lophius vomerinus	0.47	32	0.08	428
Exodromidia sp.	0.34	32	0.06	
Genypterus capensis	0.32	2	0.05	418
Lolligoncula mercatoris	0.27	113	0.05	
Engraulis capensis	0.19	16	0.03	
Gastropod nei	0.11	16	0.02	
Sepia sp.	0.03	16	0.01	
Total	602.04		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 41  
DATE : 04/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°36.51  
start stop duration Lon E 17°56.79  
TIME : 08:34:31 09:04:29 30.0 (min) Purpose : 3  
LOG : 928.02 929.60 1.6 Region : 6100  
FDEPTH: 159 160 Gear cond.: 0  
BDEPTH: 159 160 Validity : 0  
Towing dir: 0° Wire out : 430 m Speed : 3.2 km  
Sorted : 80 Total catch: 249.09 Catch/hour: 498.68

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
weight numbers			
Lampyctodes hectoris	177.98	74158	35.69
Merluccius paradoxus	88.29	3339	17.70 434
Pterygosquilla armata capensis	77.08	5930	15.46
Merluccius capensis	37.84	244	7.59 435
Merluccius paradoxus	37.84	4559	7.59 436
Sepia australis	23.82	1191	4.78
Chelidonichthys capensis	21.42	62	4.30 431
Todaropsis eblanae	7.71	272	1.55 437
Starfish, mixed	6.20	0	1.24
Whelks	4.41	98	0.89
Mauroliscus muelleri	4.20	3822	0.84
Paracallionymus costatus	3.43	364	0.69
J E L Y F I S H	1.54	6	0.31
Lepidopus caudatus	1.21	128	0.24
Gastropod nei	1.04	28	0.21
Merluccius paradoxus	1.00	2	0.20 433
Genypterus capensis	0.80	6	0.16 430
Callorhynchus capensis	0.80	2	0.16
Exodromidia sp.	0.77	42	0.15
Cynoglossus zanzibarensis	0.52	4	0.10 432
Parapagurus dimorphus	0.34	98	0.07
Amalda bullioides	0.20	28	0.04
Turritella	0.11	14	0.02
Coelorinchus simorhynchus	0.07	6	0.01
Physiculus capensis	0.05	6	0.01
Total	498.68		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 42  
DATE : 04/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°17.31  
start stop duration Lon E 17°42.18  
TIME : 11:44:45 12:15:19 30.6 (min) Purpose : 3  
LOG : 950.93 952.42 1.5 Region : 6100  
FDEPTH: 186 193 Gear cond.: 0  
BDEPTH: 186 193 Validity : 0  
Towing dir: 0° Wire out : 470 m Speed : 2.9 km  
Sorted : 109 Total catch: 171.59 Catch/hour: 336.79

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
weight numbers			
Merluccius paradoxus	96.17	1772	28.56 443
Todaropsis eblanae	43.28	1140	12.85 446
Chelidonichthys capensis	32.78	71	9.73 438
Pterygosquilla armata capensis	26.52	1894	7.87
Lampyctodes hectoris	25.69	6944	7.63
Paracallionymus costatus	22.88	2357	6.79
Sepia australis	13.74	697	4.08
Callorhynchus capensis	10.60	6	3.15
Lophius vomerinus	10.21	12	3.03 441
Merluccius paradoxus	10.17	886	3.02 445
Merluccius paradoxus	7.07	10	2.10 440
J E L Y F I S H	6.87	0	2.04
Merluccius capensis	6.87	16	2.04 439
Whelks	6.25	96	1.86
Gastropod nei	2.34	96	0.69
Coelorinchus simorhynchus	2.23	179	0.66
Heart urchin	1.63	69	0.49
Starfish	1.59	261	0.47 0
Helicolenus dactylopterus	1.37	48	0.41 444
Cynoglossus zanzibarensis	1.27	14	0.38 447
Zeus capensis	1.04	14	0.31 448
Trachurus capensis	0.98	4	0.29 442
Starfish yellow/orange	0.90	14	0.27
Lepidopus caudatus	0.83	41	0.25
Sepia hieronis	0.75	34	0.22
Starfish - many arms	0.59	34	0.18
Amalda bullioides	0.52	69	0.15
Lophius vomerinus	0.43	14	0.13 449
Etrumeus whiteheadi	0.31	7	0.09
Starfish	0.22	7	0.07
Parapagurus dimorphus	0.16	14	0.05
Shrimps, small, non comm.	0.15	14	0.04
Holohalaelurus regani	0.14	7	0.04
XXXXXXXX	0.10	7	0.03
Lolligoncula mercatoris	0.09	41	0.03
Ophiuroidea	0.04	7	0.01
Physiculus capensis	0.02	7	0.01
Total	336.79		100.00

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 43		Plesionika martia		0.46	178	0.05
DATE	: 04/02/2012	GEAR TYPE: BT NO:	21	POSITION: Lat	S 33°26.61	Rossia enigmatica		0.41	11	0.04
TIME	: 14:14:33	start stop duration		Lon	E 17°31.77	Photichthys argenteus		0.27	8	0.03
LOG	: 966.91	968.57	1.7	Purpose	: 3	Exodromidia sp.		0.27	22	0.03
FDEPTH:	415	417		Region	: 6100	Starfish		0.26	33	0.03
BDEPTH:	415	417		Gear cond.:	0	Mursia cristimanus		0.19	22	0.02
Towing dir:	0°	Wire out	: 1050 m	Validity:	0	Paracallionymus costatus		0.18	33	0.02
Sorted	: 134	Total catch:	211.31	Speed	: 3.3 km	Avocettina acuticeps		0.09	2	0.01
SPECIES		CATCH/HOUR		Catch/hour:	423.18	Tripteroptychys gilchristi		0.06	4	0.01
		% OF TOT. C		SAMP		Anemones, yellow		0.04	11	0.00
		weight	numbers			Merluccius paradoxus		0.03	11	0.00
		Merluccius paradoxus	110.15	76	26.03	455	XXXXXXX	0.03	11	0.00
		Coelorinchus simorhynchus	83.31	1226	19.69		Leech	0.03	11	0.00
		Notacanthus sexspinis	65.69	521	15.52		Psychrolutes macrocephalus	0.02	2	0.00
		Lophius vomerinus	28.84	8	6.81	451	Aphrodite pol	0.02	11	0.00
		Etmopterus brachyurus	22.03	82	5.21		Coelorinchus braueri	0.02	2	0.00
		Merluccius paradoxus	16.02	78	3.79	453	Diretmus argenteus	0.00	2	0.00
		Bassanago albescens	15.02	14	3.55		Total	929.02	100.00	
		Genypterus capensis	15.02	6	3.55	452				
		Whelks	13.46	409	3.18					
		Merluccius paradoxus	12.82	16	3.03	454				
		Octopus magnificus	8.01	2	1.89					
		Helicolenus dactylopterus	6.01	30	1.42	450				
		Parapagurus dimorphus	4.09	224	0.97					
		Starfish - fleshy	3.84	24	0.91					
		Starfish yellow/orange	3.66	160	0.87					
		Starfish - many arms	2.70	216	0.64					
		Todaropsis eblanae	2.32	80	0.55	456				
		Pterygosquilla armata capensis	1.27	152	0.30					
		Psychrolutes macrocephalus	1.20	56	0.28					
		Shrimps, small, non comm.	1.19	248	0.28					
		Rochinia sp.	0.78	104	0.18					
		Parapagurus dimorphus	0.74	72	0.17	0				
		Rossia enigmatica	0.74	24	0.17					
		Starfish red (pentagon)	0.62	24	0.15					
		Gastropod nei	0.55	144	0.13					
		Stereomastis sp.	0.49	72	0.12					
		Amalda bullioides	0.43	128	0.10					
		Lucigadus ori	0.42	48	0.10					
		Tripteroptychys gilchristi	0.40	8	0.09					
		Paracallionymus costatus	0.36	40	0.09					
		Merluccius paradoxus	0.34	64	0.08	457				
		Mursia cristimanus	0.16	24	0.04					
		Sepia australis	0.15	8	0.04					
		Sepia sp. New SA	0.12	16	0.03					
		Physiculus capensis	0.08	8	0.02					
		Anemones, pink	0.07	16	0.02					
		S H R I M P S	0.05	0	0.01					
		Cone gastropod	0.04	8	0.01					
		Plastic cans-jars etc	0.00	2	0.00					
		Total	423.18		100.00					

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 46  
 DATE :05/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°16.35  
 Lon E 17°15.87  
 TIME :06:32:56 07:02:48 29.9 (min) Purpose : 3  
 LOG : 1051.91 1053.33 1.4 Region : 6100  
 FDEPTH: 453 467 Gear cond.: 0  
 BDEPTH: 453 467 Validity : 0  
 Towing dir: 0° Wire out : 1125 m Speed : 2.9 km  
 Sorted : 904 Total catch: 923.03 Catch/hour: 1854.10

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Merluccius paradoxus	775.36	638	41.82
Helicolenus dactylopterus	462.00	2163	24.92
Bassanago albescens	194.84	157	10.51
Coelorinchus simorhynchus	130.57	1593	7.84
Merluccius paradoxus	110.48	146	5.96
Lophius vomerinus	86.37	18	4.66
Notacanthus sexspinis	27.12	343	1.46
Gorgonians	11.80	129	0.64
Parapagurus pilosimanus	11.80	370	0.64
Octopus magnificus	10.04	4	0.54
Coral - mixed	7.51	0	0.40
Genypterus capensis	5.62	4	0.30
Starfish yellow/orange	5.43	171	0.29
Whelks	3.22	96	0.17
Funchalia woodwardi	2.90	279	0.16
Beryx splendens	1.81	4	0.10
Starfish yellow/orange	1.07	22	0.06
Rochinia sp.	0.87	171	0.05
Starfish - many arms	0.86	183	0.05
Lycoteuthis lorigera	0.79	20	0.04
Starfish red (pentagon)	0.67	21	0.04
Lucigadus ori	0.63	40	0.03
Gorgonians (coral) red/pink	0.58	0	0.03
Malacocephalus laevis	0.52	2	0.03
Photichthys argenteus	0.45	10	0.02
Stereomastis sp.	0.29	64	0.02
Anemones, white	0.06	2	0.00
Tripteroptychys gilchristi	0.06	2	0.00
Paracallionymus costatus	0.06	10	0.00
Neoscopelus macrolepidotus	0.05	2	0.00
Anemones, yellow	0.04	11	0.00
Merluccius paradoxus	0.04	8	0.00
Rossia enigmatica	0.04	2	0.00
Symbolophorus boops	0.03	2	0.00
Munidopsis sp.	0.02	11	0.00
XXXXXXX	0.02	11	0.00
Coelorinchus braueri	0.02	4	0.00
Mursia cristimanus	0.02	11	0.00
Chauliodes sloani	0.02	2	0.00
Diretmus argenteus	0.01	4	0.00
Total	1854.10		100.00

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 44		Plesionika martia		0.46	178	0.05
DATE	: 04/02/2012	GEAR TYPE: BT NO:	21	POSITION: Lat	S 33°30.51	Rossia enigmatica		0.41	11	0.04
TIME	: 15:58:10	16:28:11	30.0 (min)	Lon	E 17°27.72	Photichthys argenteus		0.27	8	0.03
LOG	: 974.93	976.36	1.4	Purpose	: 3	Exodromidia sp.		0.27	22	0.03
FDEPTH:	481	480		Region	: 6100	Starfish		0.26	33	0.03
BDEPTH:	481	480		Gear cond.:	0	Mursia cristimanus		0.19	22	0.02
Towing dir:	0°	Wire out	: 1200 m	Validity:	0	Paracallionymus costatus		0.18	33	0.02
Sorted	: 157	Total catch:	174.81	Speed	: 2.9 km	Avocettina acuticeps		0.09	2	0.01
SPECIES		CATCH/HOUR		Catch/hour:	349.38	Tripteroptychys gilchristi		0.06	4	0.01
		% OF TOT. C		SAMP		Anemones, yellow		0.04	11	0.00
		weight	numbers			Merluccius paradoxus		0.03	11	0.00
		Bassanago albescens	113.92	190	32.61		XXXXXXX	0.03	11	0.00
		Chaceon maritae	51.97	468	14.87		Leech	0.03	11	0.00
		Merluccius paradoxus	49.37	42	14.13	462	Psychrolutes macrocephalus	0.02	2	0.00
		Coelorinchus simorhynchus	35.78	454	10.24		Aphrodite pol	0.02	11	0.00
		Starfish - fleshy	14.99	30	4.29		Coelorinchus braueri	0.02	2	0.00
		Starfish - many arms	14.31	32618	4.10		Mursia cristimanus	0.02	4	0.00
		Lophius vomerinus	13.99	6	4.00	459	Chauliodes sloani	0.02	2	0.00
		Etmopterus sp.	11.99	80	3.43		Diretmus argenteus	0.01	4	0.00
		Notacanthus sexspinis	8.39	120	2.40		Total	1854.10	100.00	
		Merluccius paradoxus	5.00	26	1.43	460				
		Merluccius paradoxus	5.00	8	1.43	461				
		Etmopterus brachyurus	3.40	10	0.97					
		Helicolenus dactylopterus	3.20	22	0.92	458				
		Whelks	2.12	60	0.61					
		Starfish yellow/orange	2.10	54	0.60					
		Plesionika martia	1.71	322	0.49					
		Psychrolutes macrocephalus	1.58	12	0.45					
		Raja confundens	1.52	2	0.43					
		Anemones, pink	1.32	12	0.38					
		Sergia sp.	1.32	244	0.38					
		Anemones, white	1.14	18	0.33					
		Coelorinchus braueri	1.07	102	0.31					
		Synbranchyurus sp.	0.98	6	0.28					
		Hoplostethus mediterraneus	0.46	6	0.13					
		Etmopterus brachyurus, juvenile	0.38	42	0.11					
		Lucigadus ori	0.38	36	0.11					
		Starfish white 5 arms	0.32	54	0.09					
		Starfish red (pentagon)	0.32	6	0.09					
		Funchalia woodwardi	0.24	24	0.07					
		Nezumia sp.	0.20	36	0.06					
		Rochinia sp.	0.19	42	0.05					
		Merluccius paradoxus	0.19	36	0.05	463				
		Rossia enigmatica	0.18	6	0.05					
		Parapagurus dimorphus	0.14	6	0.04					
		Stereomastis sp.	0.11	18	0.03					
		Parapagurus pilosimanus	0.09	6	0.03					
		Cranhia scabra	0.07	2	0.02					
		Mursia cristimanus	0.07	6	0.02					
		Total	349.48		100.03					

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 47  
 DATE :05/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 33°5.31  
 Lon E 17°30.93  
 TIME :09:18:50 09:49:08 30.3 (min) Purpose : 3  
 LOG : 1070.28 1071.81 1.5 Region : 6100  
 FDEPTH: 340 334 Gear cond.: 0  
 BDEPTH: 340 334 Validity : 0  
 Towing dir: 0° Wire out : 334 m Speed : 3.0 km  
 Sorted : 217 Total catch: 249.19 Catch/hour: 493.44

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
Merluccius paradoxus	166.34	938	33.71
Coelorinchus simorhynchus	81.19	853	16.45
Lophius vomerinus	37.62	20	7.62
Merluccius paradoxus	37.62	36	7.62
Parapagurus pilosimanus	22.18	1109	4.49
Rochinia sp.	21.76	1497	4.41
Helicolenus dactylopterus	18.42	113	3.73
Brama brama	15.25	16	3.09
PORIPERA (Sponges)	14.46	55	2.93
Whelks	13.86	693	2.81
Octopus magnificus	13.27	2	2.69
Lampanyctodes hectotis	5.99	2303	1.21
Starfish yellow/orange	5.96	194	1.21
Trachurus capensis	4.36	20	0.88
Malacocephalus laevis	3.96	14	0.80
Todaropsis eblanae	3.83	42	0.78
Dead coral	3.33	0	0.67
Mursia cristimanus	3.19	388	0.65
Coelorinchus simorhynchus	2.70	83	0.55
Starfish - fleshy	2.51	42	0.51
URCHINS	1.79	14	0.36
Rossia enigmatica	1.69	42	0.34
Merluccius paradoxus	1.47	2	0.30
Zeus capensis	1.39	2	0.28
Cruriraja parcomaculata	1.39	2	0.28
Exodromidia sp.	1.25	111	0.25
Gorgonians yellow	1.23	0	0.25
Sepia hieronis	1.00	14	0.20

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 48  
 DATE :05/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°52.73  
 start stop duration Lon E 17°20.86  
 TIME :11:46:51 12:17:34 30.7 (min) Purpose : 3  
 LOG : 1085.73 1087.28 1.5 Region : 6100  
 FDEPTH: 306 305 Gear cond.: 0  
 BDEPTH: 306 305 Validity : 0  
 Towing dir: 0° Wire out : 760 m Speed : 3.0 kn  
 Sorted : 213 Total catch: 441.72 Catch/hour: 862.72

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 51  
 DATE :06/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 31°58.63  
 start stop duration Lon E 18°6.30  
 TIME :04:34:06 05:05:19 31.2 (min) Purpose : 3  
 LOG : 1186.30 1187.92 1.6 Region : 6100  
 FDEPTH: 105 105 Gear cond.: 0  
 BDEPTH: 105 105 Validity : 0  
 Towing dir: 0° Wire out : 300 m Speed : 3.1 kn  
 Sorted : 100 Total catch: 633.55 Catch/hour: 1217.59

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	390.63	3691	45.28	497
Coelorrinchus simorhynchus	117.19	2857	13.58	
Zeus capensis	101.56	176	11.77	492
Merluccius capensis	68.36	29	7.92	501
Lophius vomerinus	53.52	27	6.20	496
Brama brama	32.62	53	3.78	493
Merluccius capensis	17.58	12	2.04	500
Aphrodite pol	10.88	2529	1.26	
Malacocephalus laevis	9.77	39	1.13	
Helicolenus dactylopterus	9.77	94	1.13	495
Rochinia sp.	6.58	549	0.76	
Paracallionymus costatus	5.99	748	0.69	
Merluccius paradoxus	5.08	4	0.59	498
Starfish	4.92	176	0.57	
Todarodes angolensis	4.88	10	0.57	502
Squalus mitsukurii	3.91	2	0.45	
Raja straeleni	3.91	2	0.45	
Exodromidia sp.	3.42	332	0.40	
Holohalaelurus regani	2.34	8	0.27	
Trachurus capensis	1.66	10	0.19	503
Rossia enigmatica	1.41	39	0.16	
Cruriraja parcomaculata	1.17	2	0.14	
Merluccius paradoxus	1.17	2	0.14	499
Todaropsis eblanae	1.08	10	0.13	505
Giant bullia gastropod	0.98	29	0.11	
Whelks	0.63	29	0.07	
Mursia cristimanus	0.55	78	0.06	
Genypterus capensis	0.55	2	0.06	494
Gastropod nei	0.28	39	0.03	
Sepia sp. New SA	0.19	49	0.02	
Lucigadus ori	0.07	10	0.01	
Physiculus capensis	0.04	10	0.00	
Merluccius paradoxus	0.04	10	0.00	504
Chlorophthalmus sp.	0.04	10	0.00	
Total	862.72		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	949.39	14164	77.97	519
Chelidonichthys capensis	61.50	250	5.05	515
Gastropod nei	56.60	4044	4.65	
Pterygosquilla armata capensis	49.66	1774	4.08	
J E L Y F I S H	48.57	0	3.99	
Sufflogobius bibarbatus	24.10	1845	1.98	
Lepidopus caudatus	14.91	1130	1.22	
Callorhynchus capensis	6.73	4	0.55	
Austroglossus microlepis	2.69	13	0.22	516
Todaropsis eblanae	1.35	91	0.11	521
Jasus lalandii	0.77	8	0.06	518
Merluccius capensis	0.49	54	0.04	520
Lolligoncula mercatoris	0.44	165	0.04	
Coral - Alcyonaria?	0.20	256	0.02	
Genypterus capensis	0.19	2	0.02	517
Total	1217.59		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 52  
 DATE :06/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°2.05  
 start stop duration Lon E 17°55.14  
 TIME :06:41:32 07:11:50 30.3 (min) Purpose : 3  
 LOG : 1199.60 1201.21 1.6 Region : 6100  
 FDEPTH: 122 123 Gear cond.: 0  
 BDEPTH: 122 123 Validity : 0  
 Towing dir: 0° Wire out : 320 m Speed : 3.2 kn  
 Sorted : 483 Total catch: 508.26 Catch/hour: 1006.45

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
PORIPERA (Sponges)	633.66	0	62.96	
Merluccius capensis	161.39	973	16.04	522
Chelidonichthys capensis	54.46	210	5.41	525
Pterygosquilla armata capensis	49.50	4499	4.92	
Thyrsites atun	22.18	12	2.20	523
Merluccius paradoxus	17.82	669	1.77	531
Brama brama	14.06	8	1.40	524
Merluccius paradoxus	9.31	212	0.92	532
Gastropod nei	7.41	297	0.74	
Raja straeleni	6.53	4	0.65	
Todaropsis eblanae	5.94	265	0.59	533
Sepia australis	5.54	309	0.55	
J E L Y F I S H	4.55	0	0.45	
Callorhynchus capensis	3.56	2	0.35	
Exodromidia sp.	3.56	123	0.35	
Paracallionymus costatus	1.71	226	0.17	
Lepidopus caudatus	0.99	75	0.10	
Genypterus capensis	0.59	6	0.06	527
Helicolenus dactylopterus	0.59	40	0.06	530
Sepia hieronis	0.54	8	0.05	
Coelorrinchus simorhynchus	0.46	36	0.05	
Lophius vomerinus	0.44	2	0.04	529
Cynoglossus zanzibarensis	0.38	4	0.04	528
Starfish - purple	0.35	63	0.03	
Jasus lalandii	0.26	2	0.03	526
Merluccius paradoxus	0.22	24	0.02	534
Lophius vomerinus	0.15	8	0.01	535
Mursia cristimanus	0.13	8	0.01	
Physiculus capensis	0.11	12	0.01	
Lolligoncula mercatoris	0.06	28	0.01	
Total	1006.45		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 49  
 DATE :05/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°32.69  
 start stop duration Lon E 17°46.63  
 TIME :16:56:58 17:28:18 31.3 (min) Purpose : 3  
 LOG : 1119.80 1121.47 1.7 Region : 6100  
 FDEPTH: 144 158 Gear cond.: 0  
 BDEPTH: 144 158 Validity : 0  
 Towing dir: 0° Wire out : 450 m Speed : 3.2 kn  
 Sorted : 109 Total catch: 200.03 Catch/hour: 383.08

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Lampanyctodes hectoris	117.97	39323	30.80	
Merluccius capensis	103.42	741	27.00	508
Pterygosquilla armata capensis	63.58	3531	16.60	
Chelidonichthys capensis	28.73	79	7.50	506
JELLYFISH	22.98	0	6.00	
Callorhynchus capensis	15.32	11	4.00	
Exodromidia sp.	9.73	92	2.54	
Maurollicus muelleri	4.60	3983	1.20	
Genypterus capensis	2.68	21	0.70	507
Whelks	2.02	46	0.53	
Todaropsis eblanae	1.44	77	0.38	513
Sepia australis	1.35	54	0.35	
Merluccius paradoxus	1.30	115	0.34	512
Helicolenus dactylopterus	1.23	84	0.32	511
Gastropod nei	0.87	38	0.23	
Nudibranchs	0.70	123	0.18	
Sepia hieronis	0.69	15	0.18	
Starfish	0.64	61	0.17	
Solenocera sp.	0.60	92	0.16	
Paracallionymus costatus	0.57	69	0.15	
Lophius vomerinus	0.57	2	0.15	509
Zeus capensis	0.49	8	0.13	514
Lepidopus caudatus	0.43	46	0.11	
Cynoglossus zanzibarensis	0.38	2	0.10	510
Sufflogobius bibarbatus	0.33	15	0.09	
Gorgonians	0.31	0	0.08	
Engraulis capensis	0.15	31	0.04	
Total	383.08		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 53  
 DATE :06/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°9.88  
 start stop duration Lon E 17°43.64  
 TIME :09:02:18 09:32:10 29.9 (min) Purpose : 3  
 LOG : 1215.26 1216.91 1.6 Region : 6100  
 FDEPTH: 153 151 Gear cond.: 0  
 BDEPTH: 153 151 Validity : 0  
 Towing dir: 0° Wire out : 420 m Speed : 3.3 kn  
 Sorted : 33 Total catch: 206.79 Catch/hour: 415.53

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	174.82	4883	42.07	537
Pterygosquilla armata capensis	97.66	6975	23.50	
Lampanyctodes hectoris	71.47	31075	17.20	
Merluccius capensis	17.72	84	4.27	539
Sepia australis	11.45	774	2.76	
J E L Y F I S H	8.68	0	2.09	
Todaropsis eblanae	5.91	181	1.42	540
Helicolenus dactylopterus	5.67	374	1.36	538
Merluccius paradoxus	4.94	458	1.19	541
Paracallionymus costatus	2.75	338	0.66	
Mollusc eggs	2.56	0	0.62	
Maurollicus muelleri	2.07	2070	0.50	
Whelks	1.88	36	0.45	
Solenocera sp.	1.80	217	0.43	
Chelidonichthys capensis	1.73	4	0.42	536
Gastropod nei	1.37	48	0.33	
Holohalaelurus regani	0.96	24	0.23	
Exodromidia sp.	0.78	48	0.19	
Starfish	0.57	72	0.14	
Jasus lalandii	0.28	2	0.07	542
Sepia hieronis	0.22	12	0.05	
Starfish - purple	0.16	24	0.04	
Amalda bullioides	0.08	12	0.02	
Total	415.53		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 50  
 DATE :05/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 32°30.26  
 start stop duration Lon E 17°47.01  
 TIME :18:28:25 18:52:09 23.7 (min) Purpose : 1  
 LOG : 1123.59 1124.90 1.3 Region : 6100  
 FDEPTH: 17 10 Gear cond.: 0  
 BDEPTH: 155 150 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.3 kn  
 Sorted : 0 Total catch: 502.00 Catch/hour: 1268.74

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Lampanyctodes hectoris	758.21	0	59.76	
Engraulis capensis	126.37	0	9.96	
Etrumeus whiteheadi	126.37	0	9.96	
Maurollicus muelleri	126.37	0	9.96	
Unidentified fish	63.18	0	4.98	
Sardinops ocellatus	63.18	0	4.98	
Thyrsites atun	5.05	3	0.40	
Total	1268.74		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 54  
DATE :06/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°13.52  
Lon E 17°27.69  
start stop duration Purpose : 3  
TIME :11:25:40 11:56:53 31.2 (min) Region : 6100  
LOG : 1232.24 1233.77 1.5 Gear cond.: 0  
FDEPTH: 179 183 Validity : 0  
BDEPTH: 179 183 Speed : 2.9 km  
Towing dir: 0° Wire out : 470 m Catch/hour: 1027.85  
Sorted : 132 Total catch: 534.66

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	584.43	11727	56.86	549
Parapagurus dimorphus	215.32	16954	20.95	
Sepia australis	64.59	2691	6.28	
Lampanyctodes hectoris	36.20	11312	3.52	
Merluccius capensis	29.80	104	2.90	
Chelidonichthys capensis	16.53	50	1.61	543
Merluccius paradoxus	12.69	48	1.23	544
Lophius vomerinus	11.15	35	1.08	545
Paracallionymus costatus	9.84	894	0.96	
Merluccius paradoxus	7.90	1015	0.77	550
Cynoglossus zanzibarensis	7.90	82	0.77	553
Todaropsis eblanae	6.46	174	0.63	554
Merluccius capensis	4.82	31	0.47	552
Callorhinchus capensis	3.84	2	0.37	
Helicolenus dactylopterus	3.08	123	0.30	551
Exodromida sp.	2.85	62	0.28	
Pterygosquilla armata capensis	2.80	267	0.27	
Heart urchin	1.89	51	0.18	
Genypteris capensis	1.35	8	0.13	547
Starfish red A	1.14	123	0.11	
Maurollicus muelleri	0.62	769	0.06	
Congio podus spinifer	0.53	10	0.05	
Nudibranchs	0.46	21	0.04	
Starfish red B	0.41	10	0.04	
Holohalaelurus regani	0.38	10	0.04	
Lepidopus caudatus	0.26	21	0.02	
Janus lalandii	0.23	2	0.02	548
Aphrodite pol	0.17	10	0.02	
Lophius vomerinus	0.13	31	0.01	555
Starfish - many arms	0.10	10	0.01	
Total	1027.85		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 55  
DATE :06/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°20.97  
Lon E 17°17.29  
start stop duration Purpose : 3  
TIME :13:43:25 14:13:35 30.2 (min) Region : 6100  
LOG : 1245.47 1247.01 1.5 Gear cond.: 0  
FDEPTH: 237 242 Validity : 0  
BDEPTH: 237 242 Speed : 3.1 km  
Towing dir: 0° Wire out : 604 m Catch/hour: 1431.24  
Sorted : 151 Total catch: 719.68

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	839.24	13997	58.64	563
Parapagurus dimorphus	274.44	18296	19.18	
Coelorhynchus simorhynchus	91.48	7261	6.39	
Lophius vomerinus	31.02	58	2.17	559
Heart urchin	22.87	762	1.60	
Todaropsis eblanae	20.43	274	1.43	565
Paracallionymus costatus	19.83	1943	1.39	
Merluccius paradoxus	15.51	28	1.08	562
Holohalaelurus regani	15.31	66	1.07	
Raja straeleni	14.92	12	1.04	
Thyrsites atum	13.72	8	0.96	556
Helicolenus dactylopterus	11.59	290	0.81	564
Callorhynchus capensis	10.74	4	0.75	
Merluccius capensis	8.35	12	0.58	560
Chelidonichthys capensis	8.35	14	0.58	558
Malacocephalus laevis	6.86	30	0.48	
Genypteris capensis	4.97	18	0.35	557
Torpedo nobiliana	4.57	2	0.32	
Lampanyctodes hectoris	3.26	1553	0.23	
Whelks	2.53	8	0.18	
Merluccius paradoxus	1.99	4	0.14	561
Starfish red A	1.91	213	0.13	
Zeus capensis	1.39	15	0.10	567
Gastropod nei	1.13	46	0.08	
Cynoglossus zanzibarensis	1.02	15	0.07	568
Merluccius paradoxus	0.91	107	0.06	566
Sepia australis	0.90	46	0.06	
Starfish red B	0.76	30	0.05	
Maurollicus muelleri	0.37	244	0.03	
Congio podus spinifer	0.32	2	0.02	
Exodromida sp.	0.21	15	0.01	
Rossia enigmatica	0.14	15	0.01	
Holohalaelurus regani	0.12	15	0.01	0
Amalda bulioides	0.06	15	0.00	
Total	1431.24		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 56  
DATE :06/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°28.25  
Lon E 17°3.39  
start stop duration Purpose : 3  
TIME :16:32:31 17:03:14 30.7 (min) Region : 6100  
LOG : 1263.02 1264.67 1.7 Gear cond.: 0  
FDEPTH: 293 293 Validity : 0  
BDEPTH: 293 293 Speed : 3.2 km  
Towing dir: 0° Wire out : 750 m Catch/hour: 871.45  
Sorted : 279 Total catch: 446.33

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	203.06	223	23.30	575
Merluccius paradoxus	181.58	1312	20.84	576
Parapagurus dimorphus	175.72	21431	20.16	
Coelorhynchus simorhynchus	105.43	2929	12.10	
Lophius vomerinus	70.29	41	8.07	571
Genypteris capensis	31.24	39	3.58	570
Merluccius capensis	27.92	12	3.20	574
Holohalaelurus regani	20.89	64	2.40	
Helicolenus dactylopterus	13.67	76	1.57	569
Lampanyctodes hectoris	7.50	0	0.86	
Merluccius capensis	6.44	4	0.74	573
Anemones, pink	5.66	6	0.65	
Raja straeleni	3.90	2	0.45	
Malacocephalus laevis	3.53	12	0.41	
Merluccius paradoxus	2.73	6	0.31	577
Zeus capensis	1.95	2	0.22	572
Starfish yellow/orange	1.90	29	0.22	
Todaropsis eblanae	1.68	18	0.19	578
Paracallionymus costatus	1.46	199	0.17	
Whelks	1.22	35	0.14	
Pterygosquilla armata capensis	0.75	64	0.09	
Gastropod nei	0.52	29	0.06	
Starfish red A	0.47	64	0.05	
Myxine capensis	0.40	0	0.05	
Todaropsis eblanae	0.29	6	0.03	579
Starfish	0.23	18	0.03	
Starfish - many arms	0.19	12	0.02	
Starfish white 5 arms	0.17	23	0.02	
Maurollicus muelleri	0.12	0	0.01	
Rochinia sp.	0.12	6	0.01	

Amalda bulioides 0.08 12 0.01  
Rossia enigmatica 0.07 6 0.01  
Starfish red (pentagon) 0.06 6 0.01  
Physiculus capensis 0.05 6 0.01  
Lophius vomerinus 0.04 6 0.00 580  
Paraliparis sp. 0.04 18 0.00  
Helicolenus dactylopterus 0.04 6 0.00 581  
Merluccius paradoxus 0.03 6 0.00 582

Total 871.45 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 57  
DATE :07/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°48.75  
Lon E 16°59.61  
start stop duration Purpose : 3  
TIME :04:42:42 05:13:48 31.1 (min) Region : 6100  
LOG : 1324.75 1326.35 1.6 Gear cond.: 0  
FDEPTH: 346 350 Validity : 0  
BDEPTH: 346 350 Speed : 3.1 km  
Towing dir: 0° Wire out : 875 m Catch/hour: 1047.95  
Sorted : 249 Total catch: 543.19

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	600.96	3440	57.35	591
Coelorhynchus simorhynchus	120.19	1190	11.47	
Zeus capensis	109.97	245	10.49	585
Merluccius capensis	32.80	15	3.13	589
Malacocephalus laevis	32.41	54	3.09	
Helicolenus dactylopterus	28.94	147	2.76	587
Merluccius paradoxus	28.94	23	2.76	590
PORIPERA (Sponges)	19.29	10	1.84	
Genypteris capensis	16.59	10	1.58	583
Parapagurus pilosimanus	12.96	432	1.24	
Squalus mitsukurii	8.87	6	0.85	
Rochinia sp.	6.63	552	0.63	
Whelks	6.06	284	0.58	
Lophius vomerinus	3.86	2	0.37	584
Sepia hieronis	3.08	54	0.29	
Paracallionymus costatus	2.48	311	0.24	
Merluccius capensis	2.32	2	0.22	588
Holohalaelurus regani	2.32	6	0.22	
Starfish - nei	2.30	270	0.22	
Todaropsis eblanae	1.42	14	0.14	594
Mursia cristimanus	1.42	203	0.14	
Starfish - fleshy	0.66	34	0.06	
Starfish red B	0.66	14	0.06	
Exodromida sp.	0.61	75	0.06	
Gastropod nei	0.51	108	0.05	
Beryx splendens	0.39	2	0.04	586
Starfish white 5 arms	0.21	61	0.02	
Nudibranchs	0.14	27	0.01	
Cyttus traversi	0.14	2	0.01	
Starfish - twinkle	0.14	27	0.01	
Lucigadus ori	0.12	14	0.01	
Sepia sp. New SA	0.11	20	0.01	
Helicolenus dactylopterus	0.09	20	0.01	593
Starfish - purple	0.09	20	0.01	
Sepia faurei	0.07	14	0.01	
Starfish - many arms	0.06	7	0.01	
Epigonus telescopus	0.06	7	0.01	
Starfish yellow/orange	0.05	20	0.01	
Merluccius paradoxus	0.03	7	0.00	592
Amalda bulioides	0.01	7	0.00	
Total	1047.95		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 58  
DATE :07/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°48.95  
Lon E 16°48.45  
start stop duration Purpose : 3  
TIME :07:11:42 07:41:40 30.0 (min) Region : 6100  
LOG : 1338.55 1340.21 1.7 Gear cond.: 0  
FDEPTH: 441 433 Validity : 0  
BDEPTH: 441 433 Speed : 3.3 km  
Towing dir: 0° Wire out : 1080 m Catch/hour: 2131.45  
Sorted : 527 Total catch: 1064.31

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1105.47	2309	51.86	600
Merluccius paradoxus	406.54	276	19.07	601
Coelorhynchus simorhynchus	156.61	3813	7.35	
Genypteris capensis	97.13	32	4.56	595
Bassanago albesens	83.11	126	3.90	
Notacanthus sexspinis	61.68	935	2.89	
Merluccius paradoxus	58.08	58	2.72	602
Helicolenus dactylopterus	56.07	222	2.63	599
Lophius vomerinus	38.05	14	1.79	596
Todarodes angolemsis	9.57	18	0.45	603
Zeus capensis	8.61	18	0.40	598
Heart urchin	8.29	475	0.39	
Parapagurus dimorphus	6.81	1548	0.32	
Holohalaelurus regani	5.81	16	0.27	
Anemones, white	5.69	64	0.27	
Psychrolutes macrocephalus	3.87	9	0.18	
Lucigadus ori	3.24	304	0.15	
Starfish yellow/orange	2.90	56	0.14	
Whelks	2.74	74	0.13	
Brama brama	1.40	2	0.07	597
Starfish - many arms	1.35	212	0.06	
Notopogon macrosolen	1.31	9	0.06	
Hoplostethus mediterraneus	1.09	9	0.05	
Stereomastis sp.	0.88	148	0.04	
Starfish white 5 arms	0.57	92	0.03	
Plesionika martia	0.49	148	0.02	
Physiculus capensis	0.48	18	0.02	
Gastropod nei	0.47	74	0.02	
Anemones, pink	0.43	18	0.02	
Tripterophycis gilchristi	0.37	18	0.02	
Epigonus telescopus	0.35	28	0.02	
Amalda bulioides	0.32	68	0.02	
Paracallionymus costatus	0.31	46	0.01	
Rochinia sp.	0.30	28	0.01	
Rossia enigmatica	0.25	9	0.01	
Shark eggs	0.17	9	0.01	
Starfish red A	0.15	9	0.01	
Cone gastropod	0.13	9	0.01	
Sepia hieronis	0.12	9	0.01	
Coelorhynchus braueri	0.08	18	0.00	
Lycoteuthis lorigera	0.07	9	0.00	
Champsodon capensis	0.06	9	0.00	
Sepia sp., juvenile	0.01	9	0.00	
Total	2131.45		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 59  
 DATE :07/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°47.97  
 start stop duration Purpose : 3  
 TIME :09:15:49 09:45:49 30.0 (min) Lon E 16°43.50  
 LOG : 1347.57 1349.06 1.5 Region : 6100  
 FDEPTH: 508 510 Gear cond.: 0  
 BDEPTH: 508 510 Validity : 0  
 Towing dir: 0° Wire out : 1250 m Speed : 3.0 km  
 Sorted : 912 Total catch: 911.84 Catch/hour: 1823.68

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 61  
 DATE :07/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°41.97  
 start stop duration Purpose : 3  
 TIME :13:17:23 13:48:32 31.2 (min) Lon E 16°35.15  
 LOG : 1366.67 1368.18 1.5 Region : 6100  
 FDEPTH: 668 670 Gear cond.: 0  
 BDEPTH: 668 670 Validity : 0  
 Towing dir: 0° Wire out : 1500 m Speed : 2.9 km  
 Sorted : 313 Total catch: 436.54 Catch/hour: 840.85

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	912.60	640	50.04	604
Merluccius paradoxus	454.00	474	24.89	611
Merluccius paradoxus	202.00	242	11.08	607
Genypterus capensis	47.80	14	2.62	605
Chaceon maritae	38.00	536	2.08	
Starfish - many arms	29.20	9420	1.60	
Centrophorus granulosus	26.60	2	1.46	
Notacanthus sexspinus	24.00	546	1.32	
Bassanago albescens	15.00	30	0.82	
Lophius vomerinus	10.44	6	0.57	606
Raja confundens	10.00	12	0.55	
Helicolenus dactylopterus	10.00	44	0.55	608
Todarodes angolensis	8.00	10	0.44	610
Raja leopardus	7.00	4	0.38	
Todarodes angolensis	3.60	8	0.20	609
Starfish - purple	3.28	364	0.18	
Plesionika martia	3.00	428	0.16	
Coelorinchus braueri	3.00	272	0.16	
Selachophidium guentheri	2.72	28	0.15	
Whelks	2.68	56	0.15	
Coelorinchus simorhynchus	1.87	36	0.10	
Etmopterus brachyurus	1.53	18	0.08	
Brama brama	1.36	2	0.07	612
Funchalia woodwardi	1.00	52	0.05	
Nezumia sp.	0.74	8	0.04	
Psychrolutes macrocephalus	0.59	12	0.03	
Myxine capensis	0.55	8	0.03	
Hoplostethus mediterraneus	0.50	12	0.03	
Lucigadus ori	0.45	38	0.02	
Anemones, white	0.42	4	0.02	
Photichthys argenteus	0.39	28	0.02	
Lycoteuthis lorigera	0.35	14	0.02	
Stereomastis sp.	0.27	40	0.01	
Shark eggs	0.21	12	0.01	
Paracallionymus costatus	0.14	26	0.01	
Epigonus telescopus	0.09	4	0.00	
Oreosoma atlanticum	0.08	2	0.00	
Coelorinchus matamua	0.06	2	0.00	
Haliutaea sp.	0.04	2	0.00	
Rochinia sp.	0.03	2	0.00	
Tripterophycis gilchristi	0.03	2	0.00	
Symbolophorus boops	0.03	2	0.00	
Gastropod neii	0.01	2	0.00	
Chaceon maritae, juvenile	0.01	4	0.00	
Mursia cristimanus	0.01	2	0.00	
Chlorophthalmus sp.	0.01	2	0.00	
<b>Total</b>	<b>1823.68</b>		<b>100.00</b>	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	306.26	239	36.42	627
Chaceon maritae	95.73	1040	11.39	
Merluccius paradoxus	82.83	106	9.85	628
Sergia sp.	78.20	17000	9.30	
Coelorinchus braueri	52.31	1452	6.22	
Coelorinchus matamua	38.43	94	4.57	
Nezumia sp.	22.04	243	2.62	
Lepidion capensis	19.26	40	2.29	620
Bristle worms (straws)	12.54	3798	1.49	
Notacanthus sexspinus	11.33	306	1.35	
Neocyttus rhomboidalis	10.98	98	1.31	629
Histioteuthis miranda	10.40	8	1.24	
Centrophorus squamosus	10.21	2	1.21	
Etmopterus brachyurus	9.25	37	1.10	
Raja leopardus	9.05	4	1.08	
Cruriraja parcomaculata	8.86	2	1.05	
Etmopterus sp.	6.86	56	0.82	
Todarodes angolensis	5.78	6	0.69	626
Hydrolagus sp.	5.32	12	0.63	
Trachyscorpia eschmeyerii	4.82	8	0.57	622
Anemones, pink	4.30	34	0.51	
Lophius vomerinus	4.04	2	0.48	624
Hoplostethus atlanticus	3.85	8	0.46	623
Lepidion capensis	2.79	13	0.33	632
Bathypolypus valdiviae	2.75	27	0.33	
Pseudocyttus maculatus	2.35	2	0.28	625
Ancistrolepis leueuuri	2.05	2	0.24	631
Photichthys argenteus	1.83	74	0.22	
Etmopterus sp.	1.58	20	0.19	0
Helicolenus dactylopterus	1.54	6	0.18	621
Apristurus saldanha	1.41	4	0.17	
Selachophidium guentheri	1.35	13	0.16	0
Nezumia sp.	0.96	210	0.11	0
Todarodes angolensis	0.94	2	0.11	630
Myxine capensis	0.89	13	0.11	0
Neocyttus rhomboidalis	0.79	20	0.09	633
Eptatretus sp.	0.77	2	0.09	
Neoscopelus macrolepidotus	0.72	27	0.09	
Ctenopteryx sicula	0.70	7	0.08	635
Selachophidium guentheri	0.70	6	0.08	
Trachyscorpia eschmeyerii	0.67	7	0.08	634
Anemones, white	0.62	7	0.08	
Lycodes agulhensis	0.48	13	0.06	
Whelks	0.39	7	0.05	
Psychrolutes macrocephalus	0.34	4	0.04	
Ascidians	0.30	7	0.04	
Myxine capensis	0.23	4	0.03	
Lycoteuthis lorigera	0.21	13	0.02	
Shark eggs	0.20	7	0.02	
Chaceon maritae	0.17	20	0.02	0
Starfish white 5 arms	0.14	34	0.02	
Raja leopardus, juvenile	0.12	7	0.01	
Starfish - many arms	0.12	40	0.01	
Funchalia woodwardi	0.10	13	0.01	
Plastic bags	0.00	2	0.00	
<b>Total</b>	<b>840.84</b>		<b>100.00</b>	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 60  
 DATE :07/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°49.10  
 start stop duration Purpose : 3  
 TIME :10:54:30 11:26:57 32.5 (min) Lon E 16°41.47  
 LOG : 1353.46 1355.03 1.6 Region : 6100  
 FDEPTH: 612 611 Gear cond.: 0  
 BDEPTH: 612 611 Validity : 0  
 Towing dir: 0° Wire out : 1450 m Speed : 2.9 km  
 Sorted : 239 Total catch: 255.53 Catch/hour: 472.48

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 62  
 DATE :07/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°41.29  
 start stop duration Purpose : 3  
 TIME :15:01:33 15:31:37 30.1 (min) Lon E 16°36.35  
 LOG : 1372.07 1373.69 1.6 Region : 6100  
 FDEPTH: 578 579 Gear cond.: 0  
 BDEPTH: 578 579 Validity : 0  
 Towing dir: 0° Wire out : 1450 m Speed : 3.2 km  
 Sorted : 305 Total catch: 305.30 Catch/hour: 609.17

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	116.49	91	24.65	615
Notacanthus sexspinus	48.63	838	10.29	
Chaceon maritae	34.21	488	7.24	
Etmopterus brachyurus	30.32	673	6.42	
Genypterus capensis	26.81	9	5.67	614
Coelorinchus matamua	22.93	153	4.85	
Coelorinchus braueri	21.26	625	4.50	
Starfish - many arms	21.00	5251	4.45	
Raja leopardus	20.34	17	4.30	
Lophius vomerinus	17.57	4	3.72	613
Merluccius paradoxus	16.64	20	3.52	616
Centrophorus squamosus	16.09	2	3.40	
Lepidion capensis	14.05	68	2.97	
Bristle worms (straws)	12.57	3698	2.66	
Sergia sp.	8.51	0	1.80	0
Torpedo nobiliana	7.40	2	1.57	
Selachophidium guentheri	5.40	525	1.14	
Raja confundens	5.18	13	1.10	
Anemones, pink	4.23	15	0.90	
Helicolenus dactylopterus	3.88	17	0.82	617
Nezumia sp.	3.70	35	0.78	
Bathypolypus valdiviae	2.22	35	0.47	0
Psychrolutes macrocephalus	1.91	9	0.40	
Lithodes ferox	1.67	2	0.35	
Todarodes angolensis	1.28	2	0.27	618
Todarodes angolensis	1.13	2	0.24	619
Funchalia woodwardi	1.02	92	0.22	
Whelks	0.84	15	0.18	
Photichthys argenteus	0.78	48	0.16	
Myxine capensis	0.66	11	0.14	
Starfish white 5 arms	0.50	92	0.11	
Nezumia sp.	0.48	126	0.10	0
Sergia sp.	0.47	105	0.10	
Photichthys argenteus	0.36	28	0.08	0
Anemones, white	0.33	4	0.07	
Plesionika martia	0.25	41	0.05	
Raja leopardus	0.20	7	0.04	0
Diastobranchus capensis	0.18	2	0.04	
Coelorinchus braueri	0.17	17	0.04	0
Shark eggs	0.12	6	0.03	
Bathypolypus valdiviae	0.11	6	0.02	
Stereomastis sp.	0.10	17	0.02	
Oreosoma atlanticum	0.09	2	0.02	
Funchalia woodwardi	0.07	6	0.02	0
Aristeus varidens	0.07	2	0.01	
Etmopterus brachyurus	0.07	6	0.01	0
Lycoteuthis lorigera	0.07	6	0.01	
Tripterophycis gilchristi	0.05	2	0.01	
Chaceon maritae, juvenile	0.05	6	0.01	
Diaphus sp.	0.02	2	0.00	
Plesionika martia	0.01	2	0.00	0
Physiculus capensis	0.01	2	0.00	
Pasiphaea sp.	0.01	2	0.00	
Hoplostethus mediterraneus, juvenile	0.00	2	0.00	
<b>Total</b>	<b>472.47</b>		<b>100.00</b>	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	211.51	178	34.72	641
Merluccius paradoxus	87.80	102	14.41	640
Chaceon maritae	41.90	591	6.88	
Genypterus capensis	38.71	12	6.35	636
Lophius vomerinus	34.72	14	5.70	637
Coelorinchus matamua	30.33	104	4.98	
Etmopterus brachyurus	25.34	367	4.16	
Apristurus saldanha	23.94	2	3.93	
Lepidion capensis	19.95	116	3.28	642
Raja leopardus	14.77	20	2.42	
Coelorinchus braueri	13.97	635	2.29	
Bristle worms (straws)	10.97	3540	1.80	
Selachophidium guentheri	9.98	108	1.64	
Helicolenus dactylopterus	9.18	22	1.51	638
Anemones, pink	7.02	36	1.15	
Bathypolypus valdiviae	4.49	54	0.74	
Notacanthus sexspinus	3.99	52	0.66	
Hydrolagus sp.	3.87	6	0.64	
Plesionika martia	3.29	13287	0.54	
Todarodes angolensis	2.27	6	0.37	639
Psychrolutes macrocephalus	1.95	28	0.32	
Whelks	1.47	26	0.24	
Starfish - fleshy	1.26	4	0.21	
Eptatretus profundus	1.00	2	0.16	
Anemones, white	0.87	8	0.14	
Sergia sp.	0.86	172	0.14	
Merluccius paradoxus	0.62	4	0.10	643
Starfish - many arms	0.62	239	0.10	
Bassanago albescens	0.48	2	0.08	
Nezumia sp.	0.45	42	0.07	
Photichthys argenteus	0.44	20	0.07	
Neoscopelus macrolepidotus	0.27	4	0.04	
Starfish white 5 arms	0.21	46	0.03	
Ophichthus bennettai	0.15	2	0.02	
Myxine capensis	0.12	2	0.02	
Lucigadus ori	0.08	10	0.01	
Rossia enigmatica	0.07	2	0.01	
Gastropod neii	0.06	6	0.01	
Plesiopeanaeus edwardsianus	0.05	2	0.01	
Shark eggs	0.03	2	0.01	
Raja leopardus, juvenile	0.03	2	0.01	
Hoplostethus mediterraneus	0.02	12	0.00	
Raja confundens, juvenile	0.02	2	0.00	
Abrialiopsis gilchristi	0.01	2	0.00	
MYCTOPHIDAE	0.01	2	0.00	
Pasiphaea sp.	0.01	2	0.00	
<b>Total</b>	<b>609.17</b>		<b>100.00</b>	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 63  
DATE : 07/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 32°40.93  
start stop duration Purpose : 3  
TIME : 16:43:40 17:13:47 30.1 (min) Lon E 16°39.90  
LOG : 1378.75 1380.34 1.6 Region : 6100  
FDEPTH: 459 462 Gear cond.: 0  
BDEPTH: 459 462 Validity : 0  
Towing dir: 0° Wire out : 1150 m Speed : 3.2 km  
Sorted : 545 Total catch: 544.81 Catch/hour: 1085.28

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	562.75	637	51.85	648
Merluccius paradoxus	406.37	604	37.44	649
Genypteris capensis	32.27	12	2.97	644
Chaceon maritae	28.69	404	2.64	649
Lophius vomerinus	13.94	6	1.28	645
Helicolenus dactylopterus	7.97	34	0.73	647
Bassanago albescens	7.97	16	0.73	
Coelorinchus simorhynchus	7.57	112	0.70	
Starfish - many arms	6.97	2805	0.64	
Bathypolypus valdiviae	2.76	32	0.25	
Todarodes angolensis	2.59	2	0.24	646
Whelks	1.80	44	0.17	
Notacanthus sexspinis	0.72	12	0.07	
Coelorinchus braueri	0.64	20	0.06	
Plesionika martia	0.38	76	0.04	
Starfish white 5 arms	0.29	46	0.03	
Myxine capensis	0.29	4	0.03	
Anemones, white	0.28	2	0.03	
Selachophidium guentheri	0.19	2	0.02	
Raja leopardenus, juvenile	0.17	6	0.02	
Stereomastis sp.	0.14	20	0.01	
Paracallionymus costatus	0.12	18	0.01	
Gastropod nei	0.09	10	0.01	
Epigonus telescopus	0.06	4	0.01	
Psychrolutes macrocephalus	0.06	4	0.01	
Lucigadus ori	0.06	4	0.01	
Cone gastropod	0.05	2	0.00	
Photichthys argenteus	0.03	2	0.00	
Physiculus capensis	0.02	2	0.00	
Total	1085.24		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 64  
DATE : 08/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 32°33.89  
start stop duration Purpose : 3  
TIME : 04:44:20 05:14:42 30.4 (min) Lon E 16°57.23  
LOG : 1440.68 1442.37 1.7 Region : 6100  
FDEPTH: 315 311 Gear cond.: 0  
BDEPTH: 315 311 Validity : 0  
Towing dir: 0° Wire out : 800 m Speed : 3.3 km  
Sorted : 259 Total catch: 900.30 Catch/hour: 1778.67

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	732.57	5532	41.19	654
Parapagurus dimorphus	551.20	50110	30.99	658
Merluccius paradoxus	158.05	136	8.89	658
Coelorinchus simorhynchus	84.56	1191	4.75	
Merluccius capensis	65.20	43	3.67	656
Lophius vomerinus	22.32	14	1.26	652
Raja straeleni	22.13	8	1.24	
Starfish - many arms	21.34	5615	1.20	
Merluccius capensis	15.01	12	0.84	655
Malacocephalus laevis	13.34	33	0.75	
Genypteris capensis	12.84	10	0.72	651
Holohalaelurus regani	11.85	30	0.67	
Anemones, pink	10.04	16	0.56	
Helicolenus dactylopterus	9.88	57	0.56	650
Starfish yellow/orange	9.71	132	0.55	
Merluccius paradoxus	8.50	8	0.48	657
Zeus capensis	7.11	12	0.40	653
Whelks	4.76	132	0.27	
SPORIFERA (Sponges)	4.74	4	0.27	
Paracallionymus costatus	4.29	608	0.24	
Starfish	1.82	165	0.10	
Squalus mitsukurii	1.30	2	0.07	
Gastropod nei	1.27	115	0.07	
Starfish - fleshy	1.05	16	0.06	
Exodromida sp.	1.04	33	0.06	
Todaropsis eblanae	0.49	16	0.03	
Mursia cristimanus	0.44	49	0.02	
Bathynectes piperitus	0.40	16	0.02	
Ophichthus bennettai	0.36	2	0.02	
Lampanyctodes hectoris	0.25	82	0.01	
Merluccius paradoxus	0.23	33	0.01	659
Lucigadus ori	0.21	33	0.01	
Pterygosquilla armata capensis	0.13	16	0.01	
Raja sp.	0.11	16	0.01	
Amalda bullioides	0.08	16	0.00	
Maurollicus muelleri	0.03	16	0.00	
Paraliparis sp.	0.02	16	0.00	
Total	1778.67		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 65  
DATE : 08/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 32°36.48  
start stop duration Purpose : 3  
TIME : 07:04:28 07:34:29 30.0 (min) Lon E 16°45.32  
LOG : 1455.31 1456.78 1.5 Region : 6100  
FDEPTH: 391 389 Gear cond.: 0  
BDEPTH: 391 389 Validity : 0  
Towing dir: 0° Wire out : 1000 m Speed : 2.9 km  
Sorted : 295 Total catch: 593.09 Catch/hour: 1185.79

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	501.83	1713	42.32	664
Merluccius paradoxus	219.93	242	18.55	665
Coelorinchus simorhynchus	155.95	1076	13.15	
Merluccius paradoxus	65.98	100	5.56	666
Genypteris capensis	61.98	46	5.23	661
Heart urchin	43.39	2893	3.66	
Helicolenus dactylopterus	34.99	126	2.95	660
Starfish yellow/orange	31.19	468	2.63	
Lophius vomerinus	21.99	16	1.85	662
Starfish white 5 arms	15.00	1364	1.26	
Bassanago albescens	12.00	18	1.01	
Holohalaelurus regani	4.00	6	0.34	
Anemones, pink	3.38	352	0.28	
Todarodes angolensis	3.00	6	0.25	663
Bathypolypus valdiviae	2.33	18	0.20	
Lucigadus ori	2.11	278	0.18	
Whelks	1.04	34	0.09	
Lampanyctodes hectoris	0.82	260	0.07	
Paracallionymus costatus	0.74	174	0.06	
Parapagurus pilosimanus	0.74	44	0.06	
Starfish - many arms	0.57	52	0.05	
Gastropod nei	0.49	78	0.04	
Anemones, white	0.48	8	0.04	
Amalda bullioides	0.38	138	0.03	
Starfish red (pentagon)	0.32	8	0.03	
Stereomastis sp.	0.25	44	0.02	
Malacocephalus laevis	0.19	8	0.02	
Cone gastropod	0.18	16	0.02	
Tripterophycis gilchristi	0.15	8	0.01	
Hoplostethus mediterraneus	0.13	8	0.01	
Rochinia sp.	0.09	8	0.01	

Mursia cristimanus 0.09 8 0.01  
Epigonus telescopus 0.06 8 0.01  
Lycoteuthis lorigera 0.04 8 0.00

Total 1185.79 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 66  
DATE : 08/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 32°25.62  
start stop duration Purpose : 3  
TIME : 10:11:43 10:42:02 30.3 (min) Lon E 16°23.94  
LOG : 1477.30 1478.72 1.4 Region : 6100  
FDEPTH: 630 640 Gear cond.: 0  
BDEPTH: 630 640 Validity : 0  
Towing dir: 0° Wire out : 1400 m Speed : 2.8 km  
Sorted : 330 Total catch: 329.82 Catch/hour: 652.68

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	238.46	241	36.53	671
Merluccius paradoxus	93.01	139	14.25	672
Chaceon maritae	72.23	964	11.07	
Bathyraxia smithii	40.57	6	6.22	
Coelorinchus braueri	33.64	1201	5.15	
Coelorinchus matama	33.64	141	5.15	
Lophius vomerinus	25.73	8	3.94	669
Neocyttus rhomboidalis	20.78	123	3.18	673
Trachyscorpia eschmeyerii	16.82	32	2.58	667
Lepidion capensis	10.09	42	1.55	674
Nezumia sp.	9.30	105	1.43	
Etmopterus brachyurus	8.31	42	1.27	
Starfish	7.92	0	1.21	
Sea cucumber - purple	4.35	6	0.67	
Hydrolagus sp.	3.40	6	0.52	
Bristle worms (straws)	3.36	560	0.52	
Selachophidium guentheri	3.36	36	0.52	
Psychrolutes macrocephalus	2.81	18	0.43	
Notacanthus sexspinis	2.57	32	0.39	
Helicolenus dactylopterus	2.18	10	0.33	668
Sea cucumber A	1.98	18	0.30	
Starfish - giant	1.98	2	0.30	
Todarodes angolensis	1.98	4	0.30	675
Sergia sp.	1.64	293	0.25	
Eptatretus sp.	1.58	2	0.24	
Funchalia woodwardi	1.42	190	0.22	
Hoplostethus atlanticus	1.23	2	0.19	670
Whelks	1.09	20	0.17	
Malacocephalus laevis	1.07	4	0.16	
Lycodes agulhensis	1.01	10	0.15	
Photichthys argenteus	0.94	34	0.14	
Merluccius paradoxus	0.73	0	0.11	
Raja leopardenus	0.55	2	0.08	
Bassanago albescens	0.55	2	0.08	
Bathypolypus valdiviae	0.46	6	0.07	
Neocyttus rhomboidalis	0.40	24	0.06	
Myxine capensis	0.28	4	0.04	
Lycoteuthis lorigera	0.24	8	0.04	
Raja leopardenus, juvenile	0.18	2	0.03	
Anemones, white	0.16	2	0.02	
Synbranchius sp.	0.15	2	0.02	
Ophichthus bennettai	0.14	2	0.02	
Starfish - fleshy	0.10	2	0.02	
Shark eggs	0.06	2	0.01	
Rosalia enigmatica	0.06	4	0.01	
Starfish red (pentagon)	0.05	2	0.01	
Argyropelecus aculeatus	0.05	6	0.01	
Symbolophorus boops	0.03	2	0.01	
Plesiopeneus edwardsianus	0.02	2	0.00	
Stereomastis sp.	0.01	2	0.00	
Neocyttus rhomboidalis, juvenile	0.01	2	0.00	
Rochinia sp.	0.01	2	0.00	
Total	652.68		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 67  
DATE : 08/02/2012 GEAR TYPE: BT NO: 21 POSITION: Lat S 32°23.34  
start stop duration Purpose : 3  
TIME : 11:55:46 12:26:16 30.5 (min) Lon E 16°24.93  
LOG : 1483.01 1484.48 1.5 Region : 6100  
FDEPTH: 538 541 Gear cond.: 0  
BDEPTH: 538 541 Validity : 0  
Towing dir: 0° Wire out : 1240 m Speed : 2.9 km  
Sorted : 988 Total catch: 988.36 Catch/hour: 1944.32

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	847.87	1365	43.61	676
Merluccius paradoxus	515.41	694	26.51	680
Merluccius paradoxus	346.23	592	17.81	681
Lophius vomerinus	76.72	26	3.95	679
Chaceon maritae	32.07	478	1.65	
Genypteris capensis	22.43	10	1.15	677
Starfish - fleshy	15.74	14	0.81	
Bathyraxia smithii, female	14.16	2	0.73	
Starfish - many arms	12.98	3934	0.67	
Bathyraxia smithii, male	12.59	2	0.65	
Notacanthus sexspinis	7.28	214	0.37	
Raja leopardenus	5.11	45	0.26	
Coelorinchus braueri	4.43	193	0.23	
Bathypolypus valdiviae	4.17	51	0.21	
Helicolenus dactylopterus	4.13	20	0.21	678
Selachophidium guentheri	3.23	35	0.17	
Holohalaelurus regani	1.97	6	0.10	
Neocyttus rhomboidalis	1.69	14	0.09	682
Todarodes angolensis	1.69	2	0.09	684
Anemones, pink	1.62	8	0.08	
Todarodes angolensis	1.61	4	0.08	683
Starfish white 5 arms	1.20	195	0.06	
Epigonus telescopus	1.18	43	0.06	
Malacocephalus laevis	1.01	4	0.05	
Nezumia sp.	0.87	8	0.04	
Rosalia enigmatica	0.77	47	0.04	
Lycoteuthis lorigera	0.73	20	0.04	
Whelks	0.70	18	0.04	
Anemones, white	0.64	6	0.03	
Psychrolutes macrocephalus	0.55	16	0.03	
Etmopterus brachyurus	0.51	4	0.03	
Bassanago albescens	0.51	2	0.03	
Bristle worms (straws)	0.50	79	0.03	
Lucigadus ori	0.46	59	0.02	
Tripterophycis gilchristi	0.40	18	0.02	
Sea cucumber - purple	0.40	2	0.02	
Plesionika martia	0.18	30	0.01	
Sea cucumber A	0.15	2	0.01	
Coelorinchus simorhynchus	0.11	2	0.01	
Chaceon maritae	0.09	4	0.00	0
Plesiopeneus edwardsianus	0.07	2	0.00	
Starfish red (pentagon)	0.06	2	0.00	
Gastropod nei	0.04	4	0.00	
Argyropelecus aculeatus	0.04	4	0.00	
Hoplostethus mediterraneus, juvenile	0.01	4	0.00	
Total	1944.32		100.00	



R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 68  
 DATE :08/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°20.91  
 start stop duration Purpose : 3  
 TIME :13:36:34 14:06:34 30.0 (min) Lon E 16°29.05  
 LOG : 1490.34 1491.94 1.6 Region : 6100  
 FDEPTH: 444 446 Gear cond.: 0  
 BDEPTH: 444 446 Validity : 0  
 Towing dir: 0° Wire out : 1150 m Speed : 3.2 km  
 Sorted : 573 Total catch: 572.53 Catch/hour: 1145.06  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	492.00	1190	42.97	687
Merluccius paradoxus	256.00	390	22.36	690
Merluccius paradoxus	170.00	302	14.85	691
Coelorinchus simorhynchus	40.00	564	3.49	
Brama brama	40.00	24	3.49	685
Bassanago albescens	40.00	84	3.49	
Helicolenus dactylopterus	19.00	98	1.66	688
Genypterus capensis	16.00	12	1.40	686
Holohalaelurus regani	15.80	36	1.38	
Lophius vomerinus	14.60	10	1.28	689
Starfish - many arms	14.00	3334	1.22	
Malacocephalus laevis	6.52	16	0.57	
Scylliorhinus capensis	4.00	6	0.35	
Whelks	3.00	82	0.26	
Lepidopus caudatus	1.80	2	0.16	
Raja leoparatus	1.66	12	0.14	
Todaropsis eblanae	1.62	12	0.14	692
Todarodes angolensis	1.52	2	0.13	693
Parapagurus pilosimanus	1.32	94	0.12	
Lucigadus ori	1.21	88	0.11	
Anemones, pink	0.78	8	0.07	
Epigonus telescopus	0.69	44	0.06	
Chaceon maritae	0.59	12	0.05	
Starfish white 5 arms	0.48	52	0.04	
Anemones, white	0.41	6	0.04	
Hoplostethus mediterraneus	0.35	8	0.03	
Paracallionymus costatus	0.28	58	0.02	
Rossia enigmatica	0.24	10	0.02	
Sea cucumber - purple	0.20	2	0.02	
Ophichthus bennettai	0.16	2	0.01	
Plesionika martia	0.13	34	0.01	
Psychrolutes macrocephalus	0.11	4	0.01	
Shark eggs	0.10	8	0.01	
Stereomastix sp.	0.10	32	0.01	
Merluccius paradoxus	0.09	2	0.01	694
Tripteryophycis gilchristi	0.08	4	0.01	
Munidopsis sp.	0.06	8	0.01	
Bathypolypus valdiviae	0.05	2	0.00	
Chascanopsetta lugubris	0.03	2	0.00	
Coelorinchus braueri	0.03	4	0.00	
Helicolenus dactylopterus	0.03	4	0.00	695
Argyropelecus aculeatus	0.02	2	0.00	
Rochinia sp.	0.01	2	0.00	
Total	1145.06		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 71  
 DATE :09/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°7.76  
 start stop duration Purpose : 3  
 TIME :04:46:13 05:16:40 30.4 (min) Lon E 16°59.55  
 LOG : 1578.07 1579.66 1.6 Region : 6100  
 FDEPTH: 267 268 Gear cond.: 0  
 BDEPTH: 267 268 Validity : 0  
 Towing dir: 0° Wire out : 675 m Speed : 3.1 km  
 Sorted : 159 Total catch: 264.74 Catch/hour: 521.83

SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	183.31	2025	35.13	721
Coelorinchus simorhynchus	76.87	1610	14.73	
Zeus capensis	42.38	73	8.12	716
Merluccius capensis	36.47	24	6.99	723
Brama brama	29.57	18	5.67	727
Merluccius capensis	23.65	18	4.53	722
Merluccius paradoxus	15.37	18	2.95	725
Parapagurus dimorphus	14.78	863	2.83	
Callorhynchus capensis	14.19	4	2.72	
Todaropsis eblanae	9.64	101	1.85	726
Lophius vomerinus	8.48	10	1.62	720
Helicolenus dactylopterus	8.28	95	1.59	718
Thyrssites atun	7.88	4	1.51	719
Genypterus capensis	7.10	26	1.36	717
Pterygosquilla armata capensis	5.59	195	1.07	
Starfish white 5 arms	4.17	1068	0.80	
Starfish yellow/orange	4.08	30	0.78	
Malacocephalus laevis	4.04	0	0.77	
Squalus mitsukurini	3.94	2	0.66	
Merluccius paradoxus	3.35	2	0.64	724
Raja wallacei	3.15	2	0.60	
Gastropod nei	2.58	101	0.50	
Paracallionymus costatus	2.52	307	0.48	
Holohalaelurus regani	1.97	10	0.38	
Raja straeleni	1.97	2	0.38	
Whelks	1.92	35	0.37	
Starfish - many arms	1.82	47	0.35	
Heart urchin	1.47	53	0.28	
Exodromidia sp.	0.29	12	0.06	
Sepia hieronis	0.24	6	0.05	
Sepia sp.	0.21	24	0.04	
Rossia enigmatica	0.18	30	0.04	
Rochinia sp.	0.15	12	0.03	
Amalda bullioides	0.15	18	0.03	
Champsodon capensis	0.05	6	0.01	
Lophius vomerinus	0.03	6	0.01	728
Lamp shell	0.03	6	0.01	
Helicolenus dactylopterus	0.01	6	0.00	729
Total	521.89		100.01	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 72  
 DATE :09/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°0.55  
 start stop duration Purpose : 3  
 TIME :07:14:15 07:44:31 30.3 (min) Lon E 17°12.10  
 LOG : 1594.48 1596.06 1.6 Region : 6100  
 FDEPTH: 201 204 Gear cond.: 0  
 BDEPTH: 201 204 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 3.1 km  
 Sorted : 142 Total catch: 237.45 Catch/hour: 470.66

SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	150.64	3340	32.01	737
Thyrssites atun	64.22	38	13.64	736
Paracallionymus costatus	63.18	4860	13.42	
Chelidonichthys capensis	42.81	87	9.10	730
Merluccius capensis	15.86	26	3.37	739
Sepia australis	13.88	868	2.95	
Heart urchin	13.63	317	2.90	
Coelorinchus simorhynchus	12.88	293	2.74	
Lophius vomerinus	12.49	36	2.65	734
Helicolenus dactylopterus	11.60	644	2.46	744
Starfish yellow/orange	9.91	75	2.11	
Merluccius capensis	6.44	25	1.37	743
Brama brama	5.75	4	1.22	733
Todaropsis eblanae	5.05	84	1.07	742
Genypterus capensis	4.76	16	1.01	731
Zeus capensis	4.56	8	0.97	732
Holohalaelurus regani	4.14	109	0.88	
Merluccius capensis	3.96	12	0.84	738
Lampanyctodes hectoris	3.20	1998	0.68	
Starfish white 5 arms	3.17	634	0.67	
Cynoglossus zanzibarensis	2.97	50	0.63	740
Starfish red A	1.88	115	0.40	
Merluccius paradoxus	1.83	218	0.39	741
Lophius vomerinus	1.49	45	0.32	745
Whelks	1.48	25	0.31	
Merluccius paradoxus	1.43	6	0.30	735
Pterygosquilla armata capensis	1.10	125	0.23	
Sepia hieronis	1.07	50	0.23	
Exodromidia sp.	1.06	45	0.23	
Mollusc eggs	0.97	0	0.21	
Gastropod nei	0.72	30	0.15	
Lepidopus caudatus	0.67	25	0.14	
Starfish - many arms	0.60	25	0.13	
Mursia cristimanus	0.49	25	0.10	
Rossia enigmatica	0.28	25	0.06	
Rochinia sp.	0.15	10	0.03	
Parapagurus dimorphus	0.14	20	0.03	
Amalda bullioides	0.14	20	0.03	
Lampanyctodes hectoris	0.04	10	0.01	0
Lolligoncula mercatoris	0.01	5	0.00	
Total	470.66		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 70  
 DATE :08/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 32°13.54  
 start stop duration Purpose : 3  
 TIME :17:19:19 17:34:56 15.6 (min) Lon E 16°43.05  
 LOG : 1509.85 1510.69 0.8 Region : 6100  
 FDEPTH: 330 329 Gear cond.: 0  
 BDEPTH: 330 329 Validity : 0  
 Towing dir: 0° Wire out : 825 m Speed : 3.2 km  
 Sorted : 266 Total catch: 579.83 Catch/hour: 2227.28

SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	829.71	6799	37.25	710
Zeus capensis	376.44	841	16.90	706
Parapagurus dimorphus	253.52	16901	11.38	
Merluccius paradoxus	215.11	269	9.66	713
Coelorinchus simorhynchus	186.68	2558	8.38	
Merluccius capensis	65.30	38	2.93	712
Malacocephalus laevis	58.31	69	2.62	
Anemones, pink	54.62	184	2.45	
Holohalaelurus regani	23.82	54	1.07	
Starfish white 5 arms	20.97	4560	0.94	
Merluccius paradoxus	20.36	38	0.91	714
Helicolenus dactylopterus	19.97	115	0.90	707
Merluccius capensis	19.21	12	0.86	711
Todaropsis eblanae	17.29	161	0.78	715
Genypterus capensis	11.52	12	0.52	708
Raja straeleni	11.52	8	0.52	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 73  
 DATE :09/02/2012 GEAR TYPE: BT NO: 21 POSITION:Lat S 31°54.75  
 start stop duration Purpose : 3  
 TIME :09:24:55 09:55:04 30.2 (min) Lon E 17°24.56  
 LOG : 1609.52 1611.22 1.7 Region : 6100  
 FDEPTH: 154 151 Gear cond.: 0  
 BDEPTH: 154 151 Validity : 0  
 Towing dir: 0° Wire out : 450 m Speed : 3.4 km  
 Sorted : 114 Total catch: 226.51 Catch/hour: 450.76

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 76  
 DATE :09/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°32.81  
 start stop duration Purpose : 3  
 TIME :17:04:56 17:35:23 30.5 (min) Lon E 17°25.89  
 LOG : 1663.90 1665.46 1.6 Region : 6100  
 FDEPTH: 145 160 Gear cond.: 0  
 BDEPTH: 145 160 Validity : 0  
 Towing dir: 0° Wire out : 400 m Speed : 3.1 km  
 Sorted : 79 Total catch: 296.50 Catch/hour: 584.23

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Etrumeus whiteheadi	151.24 3025	33.55	
Merluccius capensis	73.63 396	16.34	752
Merluccius paradoxus	62.09 1504	13.77	755
Chelidonichthys capensis	37.81 103	8.39	749
JELLYFISH	19.10 0	4.24	
Sepia australis	17.99 750	3.99	
Paracallionymus costatus	14.57 1674	3.23	
Thyrssites atun	13.93 8	3.09	746
PORIFERA (Sponges)	12.94 0	2.87	
Turritella	7.16 1936	1.59	
Brama brama	6.37 4	1.41	747
Maurollicus muelleri	5.17 3696	1.15	
Merluccius capensis	3.98 2	0.88	750
Todaropsis eblanae	3.26 0	0.72	
Merluccius capensis	3.18 24	0.71	756
Starfish red A	3.02 231	0.67	
Merluccius paradoxus	2.63 247	0.58	757
Helicolenus dactylopterus	2.31 247	0.51	758
Whelks	2.22 40	0.49	
Merluccius paradoxus	1.67 28	0.37	754
Gastropod nei	1.31 48	0.29	
Gastropod nei	0.98 64	0.22	0
Lophius vomerinus	0.96 56	0.21	760
Lophius vomerinus	0.84 2	0.19	751
Starfish - purple	0.80 183	0.18	
Macropipus australis	0.32 8	0.07	
Jasus lalandii	0.26 2	0.06	748
Congiopodus spinifer	0.21 8	0.05	
Amalda bullioides	0.18 24	0.04	
Goneplax angulata	0.18 8	0.04	
Heart urchin	0.14 8	0.03	
Rossia enigmatica	0.12 8	0.03	
Sepia hieronis	0.08 24	0.02	
Pterygosquilla armata capensis	0.07 8	0.02	
Lolligoncula mercatoris	0.03 16	0.01	
Total	450.76	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Sponges - yellow	287.68 0	49.24	
J E L L Y F I S H	120.59 0	20.64	
Thyrssites atun	65.02 22	11.13	776
Merluccius capensis	32.51 260	5.56	780
Pterygosquilla armata capensis	30.15 1773	5.16	
Sepia australis	12.41 713	2.12	
Callorhinchus capensis	11.23 4	1.92	
Chelidonichthys capensis	4.33 16	0.74	777
Merluccius paradoxus	3.67 100	0.63	781
Lampanyctodes hectoris	3.31 1226	0.57	
Helicolenus dactylopterus	2.25 142	0.38	782
Jasus lalandii	1.81 14	0.31	783
Exodromidia sp.	1.66 106	0.28	
Jasus lalandii	1.50 12	0.26	784
Lophius vomerinus	1.18 4	0.20	779
Genypterus capensis	0.99 6	0.17	778
Todaropsis eblanae	0.78 18	0.13	787
Starfish red A	0.55 154	0.09	
Merluccius paradoxus	0.53 47	0.09	785
Starfish - purple	0.41 65	0.07	
Whelks	0.36 6	0.06	
Paracallionymus costatus	0.35 47	0.06	
Coelorinchus simorhynchus	0.32 6	0.05	
Lepidopus caudatus	0.27 18	0.05	
Lophius vomerinus	0.20 12	0.03	786
Macropipus australis	0.15 6	0.03	
Lolligoncula mercatoris	0.02 6	0.00	
Total	584.23	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 74  
 DATE :09/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°47.98  
 start stop duration Purpose : 3  
 TIME :11:52:58 12:22:49 29.9 (min) Lon E 17°38.21  
 LOG : 1625.05 1626.53 1.5 Region : 6100  
 FDEPTH: 138 137 Gear cond.: 0  
 BDEPTH: 138 137 Validity : 0  
 Towing dir: 0° Wire out : 345 m Speed : 3.0 km  
 Sorted : 792 Total catch: 880.44 Catch/hour: 1769.72

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 77  
 DATE :10/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°34.22  
 start stop duration Purpose : 3  
 TIME :04:50:57 05:21:36 30.7 (min) Lon E 17°13.17  
 LOG : 1716.49 1718.12 1.6 Region : 6100  
 FDEPTH: 225 234 Gear cond.: 0  
 BDEPTH: 225 234 Validity : 0  
 Towing dir: 0° Wire out : 600 m Speed : 3.2 km  
 Sorted : 117 Total catch: 435.92 Catch/hour: 853.34

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Sponges - yellow	1376.88 0	77.80	
Heart urchin	70.35 1636	3.98	
Chelidonichthys capensis	66.33 221	3.75	753
Merluccius paradoxus	60.30 3276	3.41	764
Merluccius capensis	55.28 322	3.12	763
Sepia australis	29.65 2229	1.68	
Todaropsis eblanae	21.41 509	1.21	766
Paracallionymus costatus	19.16 1916	1.08	
Thyrssites atun	18.09 10	1.02	761
Callorhinchus capensis	11.06 4	0.62	
Exodromidia sp.	9.35 267	0.53	
Starfish red A	7.80 917	0.44	
Etrumeus whiteheadi	7.54 131	0.43	
Pterygosquilla armata capensis	7.24 603	0.41	
Gastropod nei	3.21 151	0.18	
Merluccius paradoxus	1.46 176	0.08	765
Lophius vomerinus	1.01 2	0.06	762
Turritella	0.75 237	0.04	
Starfish yellow/orange	0.55 5	0.03	
Whelks	0.45 10	0.03	
Lophius vomerinus	0.37 20	0.02	768
Sepia hieronis	0.27 5	0.02	
Starfish - purple	0.25 35	0.01	
Jasus lalandii	0.22 2	0.01	759
Macropipus australis	0.20 5	0.01	
Helicolenus dactylopterus	0.14 10	0.01	767
Mursia cristinanus	0.13 5	0.01	
Lepidopus caudatus	0.09 5	0.00	
Sufflogobius bibarbatatus	0.06 5	0.00	
Solenocera sp.	0.06 5	0.00	
Lolligoncula mercatoris	0.05 20	0.00	
Nudibranchs	0.04 10	0.00	
Holohalaelurus punctatus, juvenile	0.02 5	0.00	
Total	1769.72	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius paradoxus	375.86 5722	44.05	794
Parapagurus dimorphus	105.71 11746	12.39	
Lampanyctodes hectoris	54.03 15009	6.33	
Sponges - yellow	45.02 0	5.28	
Holohalaelurus regani	42.99 411	5.04	
J E L L Y F I S H	35.24 0	4.13	
Paracallionymus costatus	25.49 1821	2.99	
Merluccius capensis	23.49 176	2.75	795
Helicolenus dactylopterus	20.32 1092	2.38	797
Coelorinchus simorhynchus	18.32 523	2.15	
Heart urchin	18.09 724	2.12	
Lophius vomerinus	17.03 29	2.00	788
Raja straeleni	12.72 4	1.49	
Spatangus capensis	10.57 70	1.24	
Raja wallacel	7.83 2	0.92	
Callorhinchus capensis	7.24 2	0.85	
Merluccius capensis	6.26 10	0.73	793
Cynoglossus zanzibarensis	4.70 94	0.55	796
Merluccius capensis	3.72 8	0.44	792
Sepia australis	3.29 188	0.39	
Merluccius paradoxus	2.82 493	0.33	798
Genypterus capensis	2.74 10	0.32	789
Exodromidia sp.	2.06 117	0.24	
Starfish red A	1.87 550	0.22	
Todarodes angolensis	1.17 2	0.14	790
Merluccius paradoxus	0.98 2	0.11	791
Whelks	0.75 12	0.09	
Malacocephalus laevis	0.75 12	0.09	
Gastropod nei	0.67 35	0.08	
Lepidopus caudatus	0.43 23	0.05	
Lophius vomerinus	0.43 35	0.05	800
Starfish - many arms	0.25 12	0.03	
Todaropsis eblanae	0.16 12	0.02	799
Rossia enigmatica	0.14 12	0.02	
Trioteuthis capensis	0.07 23	0.01	
Lolligoncula mercatoris	0.06 23	0.01	
Physiculus capensis	0.06 12	0.01	
Total	853.34	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 75  
 DATE :09/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°40.86  
 start stop duration Purpose : 3  
 TIME :14:10:49 14:31:00 20.2 (min) Lon E 17°50.22  
 LOG : 1640.22 1641.31 1.1 Region : 6100  
 FDEPTH: 120 121 Gear cond.: 0  
 BDEPTH: 120 121 Validity : 0  
 Towing dir: 0° Wire out : 360 m Speed : 3.2 km  
 Sorted : 120 Total catch: 262.33 Catch/hour: 779.97

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 78  
 DATE :10/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°40.34  
 start stop duration Purpose : 3  
 TIME :08:19:09 08:49:07 30.0 (min) Lon E 17°4.08  
 LOG : 1732.77 1734.34 1.6 Region : 6100  
 FDEPTH: 255 258 Gear cond.: 0  
 BDEPTH: 255 258 Validity : 0  
 Towing dir: 0° Wire out : 640 m Speed : 3.2 km  
 Sorted : 135 Total catch: 555.82 Catch/hour: 1113.12

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Pterygosquilla armata capensis	213.33 21547	27.35	
JELLYFISH	178.39 0	22.87	
Merluccius capensis	145.69 1415	18.68	774
Chelidonichthys capensis	95.14 366	12.20	771
Maurollicus muelleri	74.93 53518	9.61	
Starfish yellow/orange	26.76 0	3.43	
Callorhinchus capensis	13.68 6	1.75	
Thyrssites atun	9.51 3	1.22	773
Gastropod nei	5.26 387	0.67	
Todaropsis eblanae	5.20 177	0.67	775
Starfish red A	3.43 725	0.44	
Starfish - purple	2.68 514	0.34	
Lepidopus caudatus	1.93 387	0.25	
Coral	1.81 2013	0.23	
Austroglossus microlepis	0.83 3	0.11	772
Jasus lalandii	0.45 3	0.06	769
Jasus lalandii	0.36 3	0.05	770
Exodromidia sp.	0.24 10	0.03	
Sufflogobius bibarbatatus	0.21 42	0.03	
Lolligoncula mercatoris	0.08 42	0.01	
Nudibranchs	0.07 31	0.01	
Total	779.97	100.00	

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Merluccius paradoxus	656.88 13055	59.01	808
Parapagurus dimorphus	189.05 18905	16.98	
Coelorinchus simorhynchus	99.33 2027	8.92	
Brama brama	24.03 22	2.16	801
Helicolenus dactylopterus	17.62 336	1.58	809
Thyrssites atun	12.02 8	1.08	805
Sponges - yellow	11.21 0	1.01	
Holohalaelurus regani	10.01 72	0.90	
Lophius vomerinus	10.01 14	0.90	804
Raja straeleni	9.61 4	0.86	
Merluccius capensis	8.41 8	0.76	807
Maurollicus muelleri	8.01 8011	0.72	
Anemones, pink	7.43 0	0.67	
Zeus capensis	7.41 12	0.67	803
Paracallionymus costatus	7.21 449	0.65	
Mustelus palumbes	6.01 2	0.54	
Heart urchin	4.89 352	0.44	
Malacocephalus laevis	4.17 48	0.37	
Genypterus capensis	4.01 10	0.36	802
Todaropsis eblanae	3.36 64	0.30	811
Gastropod nei	2.21 80	0.20	
Merluccius capensis	2.03 16	0.18	812
J E L L Y F I S H	1.60 0	0.14	
Starfish yellow/orange	1.27 32	0.11	
Todarodes angolensis	1.20 2	0.11	806
Exodromidia sp.	0.82 32	0.07	
Pterygosquilla armata capensis	0.67 64	0.06	
Merluccius paradoxus	0.64 80	0.06	810
Starfish white 5 arms	0.62 80	0.06	
Starfish - many arms	0.46 32	0.04	
Starfish red A	0.37 128	0.03	
Sepia australis	0.26 16	0.02	
Sepia hieronis	0.21 16	0.02	
Sepia robsoni	0.06 16	0.01	
Total	1113.12	100.00	

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 79		S 31°45.99		E 16°56.27		
DATE	start	stop	duration	GEAR TYPE: BT NO:	6	POSITION: Lat	Lon	Purpose:	3	
TIME	11:08:38	11:38:51	30.2 (min)	Region:	6100	Gear cond.:	0	Validity:	0	
LOG	1746.33	1747.82	1.5	Speed:	2.9 km	Catch/hour:	896.20	Wire out:	710 m	
FDEPTH:	283	287		Sorted:	153	Total catch:	451.39			
BDEPTH:	283	287								
Towing dir:	0°	Wire out:	710 m							
Sorted:	153	Total catch:	451.39							
SPECIES	CATCH/HOUR		% OF TOT. C	SAMP	SPECIES		CATCH/HOUR		% OF TOT. C	SAMP
Merluccius paradoxus	494.37	6087	55.16	818	Sponges - round	2.39	70	0.18		
Coelorinchus simorhynchus	147.72	1918	16.48		Starfish - fleshy	1.94	60	0.15		
Merluccius paradoxus	50.63	75	5.65	822	Starfish - giant	1.79	2	0.14		
Lophius vomerinus	49.64	36	5.54	817	Scyliorhinus capensis	1.59	2	0.12		
Helicolenus dactylopterus	21.84	248	2.44	814	Anemones white	0.82	12	0.06		
Merluccius capensis	19.06	14	2.13	819	Lucigadus ori	0.75	114	0.06		
Holohalaelurus regani	17.87	66	1.99		Gastropod nei	0.72	98	0.05		
Malacocephalus laevis	15.96	131	1.78		Zeus capensis	0.68	2	0.05	844	
Merluccius capensis	9.33	10	1.04	820	Rossia enigmatica	0.60	34	0.05		
Starfish yellow/orange	8.30	131	0.93		Whelks	0.58	18	0.04		
Gemypteris capensis	7.94	28	0.89	815	Octopus vulgaris	0.46	2	0.03		
Todaropsis eblanae	7.15	95	0.80	823	Sepia hieronis	0.34	6	0.03		
Zeus capensis	6.35	12	0.71	813	Starfish white 5 arms	0.29	44	0.02		
Starfish white 5 arms	5.12	608	0.57		Todaropsis eblanae	0.29	2	0.02	845	
Pterygosquilla armata capensis	4.79	429	0.53		Todaropsis eblanae	0.26	2	0.02	846	
Starfish - many arms	4.53	298	0.51		Hoplostethus mediterraneus	0.25	14	0.02		
Sponges - yellow	4.53	0	0.51		Starfish yellow/orange	0.22	12	0.02		
Rossia enigmatica	4.17	214	0.47		Epigonus telescopus	0.17	8	0.01		
Parapagurus dimorphus	2.82	429	0.32		Starfish - many arms	0.16	12	0.01		
J E L L Y F I S H	2.38	0	0.27		Starfish - yellow A	0.13	20	0.01		
Todarodes angolensis	2.18	2	0.24	816	Cone gastropod	0.12	2	0.01		
Lampanyctodes hectoris	1.92	12	0.21		Rochinia sp.	0.07	8	0.01		
Gastropod nei	1.66	60	0.18		Starfish red (pentagon)	0.05	2	0.00		
Whelks	1.49	36	0.17		Mursia cristimanus	0.04	2	0.00		
Mursia cristimanus	0.93	83	0.10		Exodromidia sp.	0.02	2	0.00		
Merluccius paradoxus	0.79	2	0.09	821	Paracallionymus costatus	0.01	2	0.00		
Starfish red (pentagon)	0.60	12	0.07		Sepia sp. New SA	0.01	4	0.00		
Paracallionymus costatus	0.57	167	0.06		Amalda bullioides	0.01	2	0.00		
Sepia hieronis	0.52	24	0.06		Total	1326.31	100.00			
Starfish red A	0.48	83	0.05							
Sepia sp. New SA	0.17	36	0.02							
Rochinia sp.	0.12	24	0.01							
Exodromidia sp.	0.11	12	0.01							
Merluccius paradoxus	0.08	24	0.01	824						
Heart urchin	0.08	12	0.01							
Total	896.20		100.00							

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 82		S 32°3.43		E 16°18.21		
DATE	start	stop	duration	GEAR TYPE: BT NO:	6	POSITION: Lat	Lon	Purpose:	3	
TIME	09:39:36	10:11:47	32.2 (min)	Region:	6100	Gear cond.:	0	Validity:	0	
LOG	1867.07	1868.56	1.5	Speed:	2.8 km	Catch/hour:	1719.22 <th>Wire out:</th> <th>1125 m</th>	Wire out:	1125 m	
FDEPTH:	456	460		Sorted:	922	Total catch:	922.36			
BDEPTH:	456	460								
Towing dir:	0°	Wire out:	1125 m							
Sorted:	922	Total catch:	922.36							
SPECIES	CATCH/HOUR		% OF TOT. C	SAMP	SPECIES		CATCH/HOUR		% OF TOT. C	SAMP
Merluccius paradoxus	1040.07	2233	60.50	847	Merluccius paradoxus	289.84	414	15.86	854	
Merluccius paradoxus	177.07	321	10.30	855	Merluccius paradoxus	177.07	321	10.30	855	
Lophius vomerinus	85.74	34	4.99	853	Lophius vomerinus	26.65	28	1.55		
Lepidopus caudatus	26.65	28	1.55		Coelorinchus simorhynchus	24.79	563	1.44		
Coelorinchus simorhynchus	24.79	563	1.44		Octopus magnificus	19.38	6	1.13		
Octopus magnificus	19.38	6	1.13		Malacocephalus laevis	12.49	32	0.73		
Malacocephalus laevis	12.49	32	0.73		Helicolenus dactylopterus	8.39	30	0.49	850	
Helicolenus dactylopterus	8.39	30	0.49	850	Gemypteris capensis	5.59	4	0.33	851	
Gemypteris capensis	5.59	4	0.33	851	Starfish - many arms	5.59	1118	0.33		
Starfish - many arms	5.59	1118	0.33		Holohalaelurus regani	5.59	11	0.33		
Holohalaelurus regani	5.59	11	0.33		Merluccius capensis	5.11	2	0.30	849	
Merluccius capensis	5.11	2	0.30	849	Parapagurus pilosimanus	2.89	121	0.17		
Parapagurus pilosimanus	2.89	121	0.17		Bassanago albescens	2.24	7	0.13		
Bassanago albescens	2.24	7	0.13		Brama brama	1.45	2	0.08	848	
Brama brama	1.45	2	0.08	848	Beryx splendens	1.04	2	0.06	852	
Beryx splendens	1.04	2	0.06	852	Whelks	0.78	21	0.05		
Whelks	0.78	21	0.05		Hoplostethus mediterraneus	0.46	6	0.03		
Hoplostethus mediterraneus	0.46	6	0.03		Lucigadus ori	0.39	41	0.02		
Lucigadus ori	0.39	41	0.02		Notacanthus sexspinis	0.38	9	0.02		
Notacanthus sexspinis	0.38	9	0.02		Coelorinchus braueri	0.34	41	0.02		
Coelorinchus braueri	0.34	41	0.02		Chaceon maritae	0.33	4	0.02		
Chaceon maritae	0.33	4	0.02		Starfish white 5 arms	0.32	34	0.02		
Starfish white 5 arms	0.32	34	0.02		Munidopsis sp.	0.32	37	0.02		
Munidopsis sp.	0.32	37	0.02		Starfish yellow/orange	0.29	4	0.02		
Starfish yellow/orange	0.29	4	0.02		Physiculus capensis	0.26	11	0.02		
Physiculus capensis	0.26	11	0.02		Anemones, white	0.24	4	0.01		
Anemones, white	0.24	4	0.01		Rossia enigmatica	0.21	9	0.01		
Rossia enigmatica	0.21	9	0.01		Lyctoteuthis lorigera	0.21	4	0.01		
Lyctoteuthis lorigera	0.21	4	0.01		Paracallionymus costatus	0.14	22	0.01		
Paracallionymus costatus	0.14	22	0.01		Stereomastis sp.	0.11	24	0.01		
Stereomastis sp.	0.11	24	0.01		Shark eggs	0.08	6	0.00		
Shark eggs	0.08	6	0.00		Argyrolepelecus aculeatus	0.07	9	0.00		
Argyrolepelecus aculeatus	0.07	9	0.00		Rochinia sp.	0.07	9	0.00		
Rochinia sp.	0.07	9	0.00		Starfish red	0.06	2	0.00		
Starfish red	0.06	2	0.00		Gastropod nei	0.05	9	0.00		
Gastropod nei	0.05	9	0.00		Photichthys argenteus	0.05	6	0.00		
Photichthys argenteus	0.05	6	0.00		Neoscolepiscus macrolepidotus	0.04	2	0.00		
Neoscolepiscus macrolepidotus	0.04	2	0.00		Psychrolutes macrocephalus	0.03	4	0.00		
Psychrolutes macrocephalus	0.03	4	0.00		Starfish red A	0.02	4	0.00		
Starfish red A	0.02	4	0.00		Electrona risso	0.02	2	0.00		
Electrona risso	0.02	2	0.00		Starfish red A	0.01	2	0.00	0	
Starfish red A	0.01	2	0.00	0	MYCTOPHIDAE	0.01	2	0.00		
MYCTOPHIDAE	0.01	2	0.00		Total	1719.22	100.00			

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 83		S 32°4.71		E 16°14.20		
DATE	start	stop	duration	GEAR TYPE: BT NO:	6	POSITION: Lat	Lon	Purpose:	3	
TIME	11:40:37	12:14:52	34.3 (min)	Region:	6100	Gear cond.:	0	Validity:	0	
LOG	1875.04	1876.65	1.6	Speed:	2.8 km	Catch/hour:	696.80 <th>Wire out:</th> <th>1300 m</th>	Wire out:	1300 m	
FDEPTH:	552	550		Sorted:	398	Total catch:	397.76			
BDEPTH:	552	550								
Towing dir:	0°	Wire out:	1300 m							
Sorted:	398	Total catch:	397.76							
SPECIES	CATCH/HOUR		% OF TOT. C	SAMP	SPECIES		CATCH/HOUR		% OF TOT. C	SAMP
Merluccius paradoxus	515.91	517	74.04	857	Merluccius paradoxus	40.29	58	5.78	858	
Merluccius paradoxus	40.29	58	5.78	858	Chaceon maritae	33.28	427	4.78		
Chaceon maritae	33.28	427	4.78		Coelorinchus braueri	15.77	752	2.26		
Coelorinchus braueri	15.77	752	2.26		Starfish - many arms	13.14	3369	1.89		
Starfish - many arms	13.14	3369	1.89		Raja leopardus	12.79	40	1.84		
Raja leopardus	12.79	40	1.84		Malacocephalus laevis	11.39	19	1.63		
Malacocephalus laevis	11.39	19	1.63		Torpedo nobiliana	8.23	2	1.18		
Torpedo nobiliana	8.23	2	1.18		Ruvettus pretiosus	8.06	4	1.16		
Ruvettus pretiosus	8.06	4	1.16		Lophius vomerinus	7.01	4	1.01	856	
Lophius vomerinus	7.01	4	1.01	856	Selachophidium guentheri	6.66	77	0.96		
Selachophidium guentheri	6.66	77	0.96		Hydrolagus sp.	4.20	7	0.60		
Hydrolagus sp.	4.20	7	0.60		Plesionika martia	3.03	266	0.43		
Plesionika martia	3.03	266	0.43		Anemones, pink	2.87	7	0.41		
Anemones, pink	2.87	7	0.41		Helicolenus dactylopterus	2.63	19	0.38	859	
Helicolenus dactylopterus	2.63	19	0.38	859	Photichthys argenteus	2.36	89	0.34		
Photichthys argenteus	2.36	89	0.34		Bristle worms (straws)	2.28	429	0.33		
Bristle worms (straws)	2.28	429	0.33		Notacanthus sexspinis	1.35	26	0.13		
Notacanthus sexspinis	1.35	26	0.13		Coelorinchus matama	0.89	14	0.12		
Coelorinchus matama	0.89	14	0.12		Psychrolutes macrocephalus	0.87	19	0.12		
Psychrolutes macrocephalus	0.87									

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 84  
 DATE :11/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 32°7.50  
 start stop duration Lon E 16°13.58  
 TIME :14:41:02 15:11:02 30.0 (min) Purpose : 3  
 LOG : 1886.05 1887.53 1.5 Region : 6100  
 FDEPTH: 612 612 Gear cond.: 0  
 BDEPTH: 612 612 Validity : 0  
 Towing dir: 0° Wire out : 1575 m Speed : 3.0 km  
 Sorted : 142 Total catch: 142.02 Catch/hour: 284.04

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	83.00	56	29.22	861
Chaceon maritae	30.00	484	10.56	
Coelorinchus braueri	25.60	34	9.01	
Bathyraxa smithii	23.60	10	8.31	
Malacocephalus laevis	22.20	48	7.82	
Lophius vomerinus	17.20	6	6.06	863
Bristle worms (straws)	9.40	2238	3.31	
Raja confundens	7.40	18	2.61	
Funchalia woodwardi	7.40	528	2.61	
Coelorinchus matamua	5.48	50	1.93	
Selachophidium guentheri	5.40	64	1.90	
Starfish - many arms	5.16	1034	1.82	
Nezumia sp.	4.92	86	1.73	
Etmopterus brachyurus	4.82	46	1.70	
Anemones, pink	4.28	18	1.51	
Merluccius paradoxus	4.20	6	1.48	860
Raja leopardus	3.60	82	1.27	
Lepidion capensis	3.40	26	1.20	
Photichthys argenteus	3.34	70	1.18	
Trachyscorpia eschmeyeri	3.00	6	1.06	862
Todarodes angolensis	3.00	4	1.06	864
Bathypolypus valdiviae	1.47	24	0.52	
Notacanthus sexspinus	1.46	26	0.51	
Ruvettus pretiosus	1.00	2	0.35	
Whelks	0.95	20	0.33	
Psychrolutes macrocephalus	0.72	12	0.25	
Anemones, whitous	0.59	6	0.21	
Starfish - fleshy	0.52	2	0.18	
Histioteuthis meleagroteuthis	0.29	4	0.10	
Sergia sp.	0.17	36	0.06	
Neoscopelus macrolepidotus	0.09	6	0.03	
Merluccius paradoxus	0.08	2	0.03	865
Rossia enigmatica	0.07	6	0.02	
Scopelosaurus herwigi	0.06	2	0.02	
Lycoteuthis lorigera	0.06	2	0.02	
Bathypterois sp.	0.04	2	0.01	
Argyropelecus aculeatus	0.03	6	0.01	
Diaphus sp.	0.03	8	0.01	
Abrialiopsis gilchristi	0.01	2	0.00	
Rochinia sp.	0.01	4	0.00	
Metal waste	0.00	4	0.00	
Total	284.04		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 85  
 DATE :11/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°57.20  
 start stop duration Lon E 16°4.28  
 TIME :17:12:41 17:43:07 30.4 (min) Purpose : 3  
 LOG : 1899.87 1901.40 1.5 Region : 6100  
 FDEPTH: 659 665 Gear cond.: 0  
 BDEPTH: 659 665 Validity : 0  
 Towing dir: 0° Wire out : 1650 m Speed : 3.0 km  
 Sorted : 121 Total catch: 151.14 Catch/hour: 298.02

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Bathyraxa smithii	69.60	284	23.36	
Merluccius paradoxus	59.15	49	19.85	866
Chaceon maritae	37.27	582	12.50	
Ruvettus pretiosus	23.66	4	7.94	
Coelorinchus simorhynchus	20.70	231	6.95	
Malacocephalus laevis	16.27	41	5.46	
Coelorinchus matamua	13.60	65	4.57	
Apristurus saldanha	9.86	2	3.31	
Lophius vomerinus	9.86	2	3.31	867
Histioteuthis miranda	7.89	8	2.65	
Todarodes angolensis	6.51	6	2.18	868
Nezumia sp.	4.98	106	1.67	
Bristle worms (straws)	2.86	666	0.96	
Selachophidium guentheri	2.01	18	0.67	
Bathypolypus valdiviae	1.95	30	0.65	0
Anemones, pink	1.59	12	0.53	
Trachyscorpia eschmeyeri	1.46	12	0.49	872
Etmopterus brachyurus	1.28	18	0.43	
Merluccius paradoxus	1.18	2	0.40	871
Lepidion capensis	1.11	12	0.37	869
Raja leopardus	1.09	24	0.37	
Psychrolutes macrocephalus	1.02	18	0.34	
Neocyttus rhomboidalis	0.88	12	0.30	870
Whelks	0.63	12	0.21	
Raja confundens	0.47	6	0.16	
Photichthys argenteus	0.30	12	0.10	
Bathypolypus valdiviae	0.21	6	0.07	
Notacanthus sexspinus	0.19	6	0.06	
Funchalia woodwardi	0.15	12	0.05	
Hydrolagus sp.	0.15	6	0.05	
Symbolophorus boops	0.08	6	0.03	
Electrona risso	0.04	6	0.01	
Total	298.02		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 86  
 DATE :12/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°51.32  
 start stop duration Lon E 16°4.13  
 TIME :04:51:54 05:22:32 30.6 (min) Purpose : 3  
 LOG : 1932.28 1933.89 1.6 Region : 6100  
 FDEPTH: 562 562 Gear cond.: 0  
 BDEPTH: 562 562 Validity : 0  
 Towing dir: 0° Wire out : 1425 m Speed : 3.2 km  
 Sorted : 199 Total catch: 199.31 Catch/hour: 390.30

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	152.74	117	39.13	873
Helicolenus dactylopterus	43.08	180	11.04	876
Bathyraxa smithii	39.16	33	10.03	
Coelorinchus braueri	34.66	629	8.88	
Chaceon maritae	26.63	380	6.82	
Ruvettus pretiosus	19.58	2	5.02	
Selachophidium guentheri	11.75	145	3.01	
Malacocephalus laevis	8.42	31	2.16	
Bristle worms (straws)	7.05	1410	1.81	
Merluccius paradoxus	6.46	10	1.66	875
Hydrolagus sp.	6.46	16	1.66	
Funchalia woodwardi	6.13	785	1.57	
Raja confundens	5.87	22	1.51	
Anemones, pink	5.72	14	1.47	
Todarodes angolensis	4.11	4	1.05	874
Coelorinchus matamua	2.64	53	0.68	
Bathypolypus valdiviae	2.44	35	0.62	
Raja leopardus	0.98	12	0.25	
Anemones, white	0.98	8	0.25	
Photichthys argenteus	0.97	29	0.25	
Nezumia sp.	0.94	23	0.24	
Starfish - many arms	0.82	104	0.21	

Notacanthus sexspinus	0.73	23	0.19	
Whelks	0.29	6	0.08	
Lycoteuthis lorigera	0.22	6	0.06	
Etmopterus brachyurus	0.22	2	0.06	
Oreosoma atlanticum	0.20	2	0.05	
Lucigadus ori	0.18	14	0.05	
Hoplostethus mediterraneus	0.16	2	0.04	
Psychrolutes macrocephalus	0.16	6	0.04	
Bathypolypus valdiviae	0.15	4	0.04	0
Bassanago albescens	0.13	2	0.03	
Myxine capensis	0.12	2	0.03	
Rossia enigmatica	0.06	4	0.02	
Diretmus argenteus	0.04	2	0.01	
Electrona risso	0.01	2	0.00	
Chauliodus sloani	0.01	2	0.00	
Abrialiopsis gilchristi	0.01	2	0.00	
Stoloteuthis sp.	0.01	2	0.00	
Total	390.30		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 87  
 DATE :12/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°43.05  
 start stop duration Lon E 16°11.23  
 TIME :07:12:58 07:43:04 30.1 (min) Purpose : 3  
 LOG : 1945.66 1947.18 1.5 Region : 6100  
 FDEPTH: 450 450 Gear cond.: 0  
 BDEPTH: 450 450 Validity : 0  
 Towing dir: 0° Wire out : 1125 m Speed : 3.0 km  
 Sorted : 845 Total catch: 873.57 Catch/hour: 1741.34

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	978.74	2912	56.21	877
Merluccius paradoxus	261.13	249	15.00	884
Bassanago albescens	149.50	231	8.59	
Lophius vomerinus	123.59	58	7.10	878
Helicolenus dactylopterus	44.85	221	2.58	879
Parapagurus pilosimanus	39.22	1557	2.25	
Merluccius paradoxus	35.88	50	2.06	885
Malacocephalus laevis	28.90	56	1.66	
Coelorinchus simorhynchus	23.92	179	1.37	
Holohalaelurus regani	11.16	26	0.64	
Heart urchin	7.41	921	0.43	
Starfish - many arms	6.74	1549	0.39	
Epigonus telescopus	6.58	75	0.38	
Anemones, pink	3.85	42	0.22	
Brama brama	3.59	2	0.21	881
Genypterus capensis	2.99	2	0.17	880
Todarodes angolensis	2.19	4	0.13	883
Todarodes angolensis	1.99	2	0.11	882
Lepidopus caudatus	1.59	2	0.09	
Raja confundens	1.36	6	0.08	
Coelorinchus braueri	1.00	24	0.06	
Rossia enigmatica	0.92	48	0.05	
Bathypolypus valdiviae	0.85	12	0.05	
Starfish white 5 arms	0.84	42	0.05	
Hoplostethus mediterraneus	0.65	8	0.04	
Stereomastis sp.	0.46	42	0.03	
Champsodon capensis	0.38	42	0.02	
Selachophidium guentheri	0.29	4	0.02	
Raja leopardus	0.22	4	0.01	
Physiculus capensis	0.19	8	0.01	
Lucigadus ori	0.17	42	0.01	
Myxine capensis	0.14	2	0.01	
Lycoteuthis lorigera	0.04	2	0.00	
Total	1741.34		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 88  
 DATE :12/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°41.43  
 start stop duration Lon E 16°24.21  
 TIME :10:03:25 10:36:01 32.6 (min) Purpose : 3  
 LOG : 1965.07 1966.52 1.5 Region : 6100  
 FDEPTH: 366 367 Gear cond.: 0  
 BDEPTH: 366 367 Validity : 0  
 Towing dir: 0° Wire out : 900 m Speed : 2.7 km  
 Sorted : 267 Total catch: 440.32 Catch/hour: 810.40

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	279.75	1425	34.52	897
Coelorinchus simorhynchus	114.85	1664	14.17	
Merluccius paradoxus	92.02	96	11.36	895
Merluccius capensis	69.20	31	8.54	891
Zeus capensis	64.42	131	7.95	886
Malacocephalus laevis	50.43	96	6.22	
Helicolenus dactylopterus	24.85	107	3.07	888
Lophius vomerinus	19.88	9	2.45	893
Holohalaelurus regani	13.66	28	1.69	
Starfish - many arms	8.28	2179	1.02	
Genypterus capensis	7.91	11	0.98	892
Brama brama	7.73	6	0.95	887
Merluccius paradoxus	7.36	9	0.91	894
Epigonus telescopus	6.48	88	0.80	
Thyrsites atun	5.52	2	0.68	889
Rossia enigmatica	5.30	241	0.65	
Starfish - fleshy	4.12	88	0.51	
Squalus mitsukurii	4.05	7	0.50	
Lepidopus caudatus	3.50	4	0.43	
Scyliorhinus capensis	2.76	4	0.34	
Merluccius capensis	2.36	2	0.29	890
Parapagurus pilosimanus	2.24	118	0.28	
Centrolophus niger	2.21	2	0.27	
Sepia hieronis	2.12	39	0.26	
Todarodes angolensis	1.84	2	0.23	896
Paracallionymus costatus	1.78	274	0.22	
Mursia cristimanus	1.30	133	0.16	
Todaropsis eblanae	0.96	5	0.12	899
Octopus magnificus	0.55	4	0.07	
Anemones, white	0.55	5	0.07	
Gastropod nei	0.47	53	0.06	
Whelks	0.33	10	0.04	
Starfish red A	0.32	10	0.04	
Amalda bullioides	0.26	53	0.03	
Selachophidium guentheri	0.19	5	0.02	
Starfish white 5 arms	0.16	39	0.02	
Sponges - round	0.13	5	0.02	
Merluccius paradoxus	0.12	10	0.01	898
Stereomastis sp.	0.07	15	0.01	
Tripterygopsis gilchristi	0.06	10	0.01	
Exodromidia sp.	0.04	5	0.01	
Rochinia sp.	0.04	5	0.00	
Cone gastropod	0.04	5	0.00	
Sepia sp.	0.03	15	0.00	
Lucigadus ori	0.03	5	0.00	
Lamp shell	0.02	5	0.00	
Epigonus telescopus	0.02	5	0.00	0
Starfish - purple	0.02	5	0.00	
Shark eggs	0.02	20	0.00	
Hoplostethus mediterraneus	0.01	5	0.00	
Total	810.40		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 89  
 DATE :12/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°26.15  
 start stop duration Purpose : 3  
 TIME :13:35:27 14:05:27 30.0 (min) Lon E 16°42.43  
 LOG : 1991.86 1993.28 1.4 Region : 6100  
 FDEPTH: 305 310 Gear cond.: 0  
 BDEPTH: 305 310 Validity : 0  
 Towing dir: 0° Wire out : 710 m Speed : 2.8 km  
 Sorted : 191 Total catch: 276.32 Catch/hour: 552.64  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Parapagurus dimorphus	116.00	20000	20.99	
Coelrorinchus simorhynchus	93.60	2340	16.94	
Merluccius paradoxus	62.00	440	11.22	904
Brama brama	50.80	38	9.19	905
Zeus capensis	36.00	60	6.51	907
Helicolenus dactylopterus	32.40	226	5.86	906
Holohalaelurus regani	32.00	90	5.79	
Merluccius capensis	25.00	12	4.52	901
Malacocephalus laevis	16.20	62	2.93	
Merluccius capensis	12.80	10	2.32	900
Chelidonichthys queketti	12.60	60	2.28	908
Merluccius paradoxus	10.00	14	1.81	902
Lophius vomerinus	10.00	8	1.81	911
Genypterus capensis	7.40	10	1.34	909
Merluccius paradoxus	6.00	8	1.09	903
Callorhynchus capensis	5.60	2	1.01	
Starfish - many arms	3.95	988	0.72	
Todaropsis eblanae	3.05	24	0.55	915
Maurollicus muelleri	2.80	0	0.51	
Cruriraja parcomaculata	2.40	4	0.43	
Lepidopus caudatus	2.20	2	0.40	
Todarodes angolensis	2.12	4	0.38	910
Rossia enigmatica	1.89	104	0.34	
Ascidans	1.21	72	0.22	
Todaropsis eblanae	0.88	8	0.16	914
Spatangus capensis	0.85	8	0.15	
Paracallionymus costatus	0.62	88	0.11	
Mursia cristimamus	0.46	48	0.08	
Lampanyctodes hectoris	0.40	0	0.07	
Pterygosquilla armata capensis	0.36	104	0.07	
Starfish yellow/orange	0.34	16	0.06	
Gastropod nei	0.20	40	0.04	
Starfish white 5 arms	0.15	40	0.03	
Sepia sp. New SA	0.14	8	0.02	
Merluccius paradoxus	0.06	24	0.01	913
Helicolenus dactylopterus	0.05	40	0.01	912
URCHINS	0.04	8	0.01	
Exodromidia sp.	0.04	8	0.01	
Inioteuthis capensis	0.02	2	0.00	
Starfish red A	0.02	8	0.00	
Total	552.64		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 92  
 DATE :13/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°10.08  
 start stop duration Purpose : 3  
 TIME :07:05:58 07:36:04 30.1 (min) Lon E 17°19.93  
 LOG : 2072.36 2074.00 1.6 Region : 6100  
 FDEPTH: 185 183 Gear cond.: 0  
 BDEPTH: 185 183 Validity : 0  
 Towing dir: 0° Wire out : 488 m Speed : 3.3 km  
 Sorted : 53 Total catch: 212.59 Catch/hour: 423.78  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	129.57	3020	30.57	931
Lampanyctodes hectoris	102.80	34266	24.26	0
Sepia australis	59.80	4013	14.11	
J E L L Y F I S H	18.14	0	4.28	
Lampanyctodes hectoris	17.62	5675	4.16	
Helicolenus dactylopterus	15.55	1086	3.67	933
Holohalaelurus regani	11.56	369	2.73	
Starfish red A	11.06	2767	2.61	
Todaropsis eblanae	9.67	369	2.28	937
Merluccius capensis	9.37	30	2.21	932
Paracallionymus costatus	6.02	744	1.42	
Cynoglossus zanzibarensis	5.28	159	1.25	934
Lophius vomerinus	4.58	16	1.08	929
Lophius vomerinus	3.59	239	0.85	936
Whelks	2.84	40	0.67	
Heart urchin	2.60	70	0.61	
Pterygosquilla armata capensis	2.19	299	0.52	
Maurollicus muelleri	2.17	2171	0.51	
Yellow sponges	1.99	2	0.47	
Raja straeleni	1.59	2	0.38	
Exodromidia sp.	1.52	80	0.36	
Parapagurus dimorphus	1.22	100	0.29	
Genypterus capensis	1.20	8	0.28	930
Merluccius paradoxus	0.62	80	0.15	935
Coelrorinchus simorhynchus	0.56	40	0.13	
Starfish - purple	0.26	40	0.06	
Turitella	0.12	20	0.03	
Aphrodite pol	0.11	10	0.03	
Lepidopus caudatus	0.11	10	0.03	
Ophiuroidea	0.06	20	0.01	
Total	423.78		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 90  
 DATE :12/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 31°4.26  
 start stop duration Purpose : 1  
 TIME :20:44:47 21:12:46 28.0 (min) Lon E 17°31.89  
 LOG : 2042.07 2043.63 1.6 Region : 6100  
 FDEPTH: 60 30 Gear cond.: 0  
 BDEPTH: 134 135 Validity : 0  
 Towing dir: 0° Wire out : 150 m Speed : 3.3 km  
 Sorted : 4 Total catch: 314.06 Catch/hour: 673.23  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Aequorea forskalea	535.91	0	79.60	
Lampanyctodes hectoris	102.89	32154	15.28	
Maurollicus muelleri	22.51	3751	3.34	
Merluccius capensis	3.41	4	0.51	918
Chelidonichthys capensis	3.22	6	0.48	
Euphausiacea	2.36	8894	0.35	
Lolligoncula mercatoris	1.50	937	0.22	
Thyrssites atun	0.75	11	0.11	916
Octopus magnificus	0.43	2	0.06	
Sardinops ocellatus	0.24	2	0.04	917
Etrumeus whiteheadi	0.02	2	0.00	919
Total	673.23		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 93  
 DATE :13/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°54.29  
 start stop duration Purpose : 3  
 TIME :09:49:40 10:21:51 32.2 (min) Lon E 17°3.72  
 LOG : 2093.76 2095.61 1.9 Region : 6100  
 FDEPTH: 200 192 Gear cond.: 0  
 BDEPTH: 200 192 Validity : 0  
 Towing dir: 0° Wire out : 550 m Speed : 3.5 km  
 Sorted : 134 Total catch: 259.20 Catch/hour: 483.13  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	240.45	3961	49.77	946
Thyrssites atun	32.81	17	6.79	943
Merluccius capensis	23.67	21	4.90	944
Chelidonichthys capensis	16.40	32	3.40	938
Sepia australis	13.20	775	2.73	
Coelrorinchus simorhynchus	12.41	345	2.57	
Paracallionymus costatus	11.74	979	2.43	
Lophius vomerinus	10.81	34	2.24	939
Yellow sponges	10.81	0	2.24	
Parapagurus dimorphus	10.57	460	2.19	
Mustelus palumbes	10.07	2	2.08	
Merluccius capensis	9.88	13	2.04	945
Todaropsis eblanae	8.84	459	1.83	951
Maurollicus muelleri	7.72	6431	1.60	0
Maurollicus muelleri	7.46	6212	1.54	
Spatangus capensis	5.70	39	1.18	
Brama brama	5.41	4	1.12	940
Whelks	5.09	6	1.05	
Heart urchin	5.03	140	1.04	
Merluccius paradoxus	3.47	503	0.72	952
Helicolenus dactylopterus	3.41	252	0.71	948
Holohalaelurus regani	3.30	112	0.68	
Etrumeus whiteheadi	3.19	62	0.66	
Pterygosquilla armata capensis	2.91	242	0.60	
Zeus capensis	2.80	6	0.58	941
Exodromidia sp.	2.64	112	0.55	
Starfish red A	2.54	705	0.53	
Cynoglossus zanzibarensis	2.52	67	0.52	949
Merluccius capensis	2.35	17	0.49	947
Genypterus capensis	1.86	13	0.39	942
Lophius vomerinus	1.40	89	0.29	950
Starfish - purple	1.02	199	0.21	
Starfish yellow/orange	0.85	22	0.18	
Starfish - many arms	0.45	22	0.09	
Sepia hieronisi	0.21	6	0.04	
Gastropod nei	0.09	6	0.02	
Aphrodite pol	0.05	6	0.01	
Goneplax angulata	0.03	6	0.01	
Total	483.13		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 91  
 DATE :13/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°4.59  
 start stop duration Purpose : 3  
 TIME :04:47:25 05:17:32 30.1 (min) Lon E 17°31.92  
 LOG : 2056.72 2058.26 1.5 Region : 6100  
 FDEPTH: 136 136 Gear cond.: 0  
 BDEPTH: 136 136 Validity : 0  
 Towing dir: 0° Wire out : 375 m Speed : 3.1 km  
 Sorted : 255 Total catch: 1134.94 Catch/hour: 2260.84  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius capensis	1300.80	10612	57.54	927
Aequorea forskalea	537.85	0	23.79	
Callorhynchus capensis	193.23	153	8.55	
Pterygosquilla armata capensis	94.82	15803	4.19	
Chelidonichthys capensis	31.87	86	1.41	921
Raja straeleni	29.08	24	1.29	
Gastropod nei	14.32	781	0.63	
Mustelus palumbes	13.35	6	0.59	
Jasus lalandii	7.77	60	0.34	925
Squalus acanthias	6.37	6	0.28	
Starfish - purple	6.10	610	0.27	
Genypterus capensis	5.78	10	0.26	920
Merluccius capensis	4.98	2	0.22	926
Starfish - many arms	2.29	279	0.10	
Lampanyctodes hectoris	1.89	462	0.08	
Austroglossus microlepis	1.79	2	0.08	
Lophius vomerinus	1.51	2	0.07	923
Sepia hieronisi	1.15	38	0.05	
Starfish red A	1.04	223	0.05	
Whelks	0.91	18	0.04	
Starfish yellow/orange	0.69	18	0.03	
Starfish white 5 arms	0.63	129	0.03	
Jasus lalandii	0.60	6	0.03	924
Funchalia woodwardi	0.43	612	0.02	
Ophichthus bennettai	0.40	2	0.02	
Solenocera sp.	0.37	38	0.02	
Exodromidia sp.	0.28	18	0.01	
Todaropsis eblanae	0.24	19	0.01	928
Sufflogobius bibarbatatus	0.22	74	0.01	
Lolligoncula mercatoris	0.07	18	0.00	
Total	2260.84		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 94  
 DATE :13/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°58.61  
 start stop duration Purpose : 3  
 TIME :12:36:39 13:05:44 29.1 (min) Lon E 16°51.36  
 LOG : 2109.37 2110.81 1.4 Region : 6100  
 FDEPTH: 225 225 Gear cond.: 0  
 BDEPTH: 225 225 Validity : 0  
 Towing dir: 0° Wire out : 575 m Speed : 3.0 km  
 Sorted : 341 Total catch: 340.87 Catch/hour: 703.30

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 96  
 DATE :14/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°10.64  
 start stop duration Purpose : 3  
 TIME :04:54:18 05:24:22 30.1 (min) Lon E 16°27.04  
 LOG : 2214.30 2215.88 1.6 Region : 6100  
 FDEPTH: 313 316 Gear cond.: 0  
 BDEPTH: 313 316 Validity : 0  
 Towing dir: 0° Wire out : 750 m Speed : 3.2 km  
 Sorted : 822 Total catch: 822.37 Catch/hour: 1640.92

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	113.48	83	16.14	959
Zeus capensis	96.97	351	13.79	953
Merluccius capensis	83.56	78	11.88	960
Lophius vomerinus	74.28	95	10.56	961
Parapagurus dimorphus	66.02	3144	9.39	
Merluccius paradoxus	63.96	879	9.09	963
Helicolenus dactylopterus	46.42	724	6.60	958
Chelidonichthys capensis	29.92	27	4.25	956
Holohalaelurus regani	28.89	120	4.11	
Todaropsis eblanae	13.41	66	1.91	966
Raja straeleni	12.38	8	1.76	
Paracallionymus costatus	12.38	1032	1.76	
Spatangus capensis	10.32	68	1.47	
Heart urchin	9.28	295	1.32	
Brama brama	5.16	4	0.73	954
Anemones, yellow	5.16	12	0.73	
Todaropsis eblanae	4.95	194	0.70	965
Todaropsis eblanae	4.54	66	0.65	964
Raja wallacei	3.92	2	0.56	
Genypteris capensis	2.68	14	0.38	955
Squalus megalops	2.27	4	0.32	
Anemones, red	2.13	19	0.30	
Coelrorinchus simorhynchus	1.39	39	0.20	
Chelidonichthys queketti	1.36	10	0.19	957
Loligo vulgaris	1.32	2	0.19	962
Cynoglossus zanzibarensis	1.03	14	0.15	967
Giant bullia gastropod	0.57	2	0.08	
Pterygosquilla armata capensis	0.57	85	0.08	
Starfish red A	0.57	80	0.08	
Starfish - fleshy	0.46	10	0.07	
Ascidans	0.45	10	0.06	
Starfish - many arms	0.43	23	0.06	
Starfish yellow/orange	0.42	2	0.06	
Starfish white 5 arms	0.40	14	0.06	
Rossia enigmatica	0.26	17	0.04	
Sepia hieronis	0.25	10	0.04	
Lepidopus caudatus	0.24	2	0.03	
Starfish - giant	0.22	2	0.03	
Myxine capensis	0.20	2	0.03	
Sponges - round	0.19	2	0.03	
Gastropod nei	0.15	6	0.02	
Exodromidia sp.	0.14	4	0.02	
Starfish - purple	0.11	27	0.02	
Lophius vomerinus	0.10	10	0.01	969
Sepia sp. New SA	0.10	19	0.01	
URCHINS	0.09	2	0.01	
Merluccius paradoxus	0.07	8	0.01	968
Sepia australis	0.06	4	0.01	
Ophiuroidea	0.03	10	0.00	
Octopus sp.	0.02	2	0.00	
Total	703.30		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Zeus capensis	792.15	1642	48.27	985
Merluccius paradoxus	283.34	1417	17.27	991
Merluccius capensis	148.65	56	9.06	998
Coelrorinchus simorhynchus	145.66	14005	8.88	
Helicolenus dactylopterus	62.06	742	3.78	993
Merluccius paradoxus	30.93	26	1.88	987
Brama brama	29.53	24	1.80	990
Lophius vomerinus	22.15	14	1.35	992
Lepidopus caudatus	14.17	26	0.86	
Merluccius capensis	13.17	6	0.80	986
Holohalaelurus regani	12.37	34	0.75	
Genypteris capensis	11.57	16	0.71	989
Epigonus telescopus	11.37	178	0.69	
Octopus magnificus	10.77	8	0.66	
Malacocephalus laevis	8.78	22	0.54	
Merluccius paradoxus	8.58	10	0.52	988
Squalus mitsukurii	8.58	8	0.52	
Sponges - yellow	6.98	0	0.43	
Spatangus capensis	5.99	60	0.36	
Centrolophus niger	4.19	2	0.26	
Todarodes angolensis	1.76	4	0.11	995
Todaropsis eblanae	1.60	14	0.10	996
Cynoglossus zanzibarensis	0.98	12	0.06	994
Paracallionymus costatus	0.87	98	0.05	
Starfish white 5 arms	0.80	160	0.05	
Notopogon macrosolen	0.68	4	0.04	
Aphroditae pol	0.55	154	0.03	
Rossia enigmatica	0.47	34	0.03	
Sepia hieronis	0.37	8	0.02	
Starfish yellow/orange	0.36	2	0.02	
Starfish red (pentagon)	0.34	4	0.02	
Trachurus capensis	0.26	2	0.02	997
Starfish - giant	0.17	4	0.01	
Gastropod nei	0.14	6	0.01	
Sea urchin	0.12	12	0.01	
Cyttus traversi	0.11	2	0.01	
Exodromidia sp.	0.11	14	0.01	
Starfish - dark	0.05	2	0.00	
Starfish - red C	0.04	6	0.00	
Physiculus capensis	0.04	2	0.00	
Starfish - many arms	0.03	2	0.00	
Champsodon capensis	0.02	2	0.00	
Parapagurus dimorphus	0.02	2	0.00	
Starfish red A	0.02	4	0.00	
Sepia sp. New SA	0.01	2	0.00	
Lamp shell	0.01	2	0.00	
Shark eggs	0.00	2	0.00	
Total	1640.92		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 95  
 DATE :13/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°4.14  
 start stop duration Purpose : 3  
 TIME :15:03:23 15:33:46 30.4 (min) Lon E 16°40.04  
 LOG : 2124.25 2125.84 1.6 Region : 6100  
 FDEPTH: 253 252 Gear cond.: 0  
 BDEPTH: 253 252 Validity : 0  
 Towing dir: 0° Wire out : 620 m Speed : 3.1 km  
 Sorted : 414 Total catch: 558.37 Catch/hour: 1102.04

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 97  
 DATE :14/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°19.45  
 start stop duration Purpose : 3  
 TIME :07:20:16 07:50:24 30.2 (min) Lon E 16°16.12  
 LOG : 2229.92 2231.56 1.6 Region : 6100  
 FDEPTH: 430 434 Gear cond.: 0  
 BDEPTH: 430 434 Validity : 0  
 Towing dir: 0° Wire out : 1080 m Speed : 3.3 km  
 Sorted : 1002 Total catch: 1699.29 Catch/hour: 3381.66

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Zeus capensis	266.45	703	24.18	970
Lepidopus caudatus	256.58	657	23.28	
Parapagurus dimorphus	104.21	5789	9.46	
Coelrorinchus simorhynchus	74.61	934	6.77	
Merluccius paradoxus	58.03	628	5.27	982
Helicolenus dactylopterus	54.67	476	4.96	977
Merluccius capensis	53.88	34	4.89	974
Spatangus capensis	37.30	414	3.38	
Emmelichthys nitidus	30.08	367	2.73	
Todaropsis eblanae	22.50	249	2.04	983
Raja straeleni	21.12	12	1.92	
Chelidonichthys queketti	20.53	99	1.86	978
Merluccius capensis	18.75	14	1.70	975
Brama brama	17.76	12	1.61	973
Thyrsites atun	17.76	6	1.61	972
Callorhynchus capensis	7.89	2	0.72	
Holohalaelurus regani	7.50	26	0.68	
Lophius vomerinus	6.91	8	0.63	976
Cynoglossus zanzibarensis	5.57	47	0.51	984
Genypteris capensis	3.08	10	0.28	979
Paracallionymus costatus	2.98	284	0.27	
Merluccius paradoxus	2.37	2	0.21	971
Raja wallacei	1.78	2	0.16	
Chelidonichthys capensis	1.70	2	0.15	980
Deepwater hermit (star)	1.48	47	0.13	
Starfish yellow/orange	1.44	12	0.13	
Starfish white 5 arms	0.97	107	0.09	
Starfish	0.94	47	0.08	
URCHINS	0.59	12	0.05	
Starfish - fleshy	0.59	12	0.05	
Dead coral	0.37	36	0.03	
Rossia enigmatica	0.36	24	0.03	
Gorgonians	0.34	12	0.03	
Congilopodus spinifer	0.30	2	0.03	
Starfish - purple	0.25	83	0.02	
Sipunculida	0.12	12	0.01	
Sepia sp. New SA	0.09	36	0.01	
Arnoglossus capensis	0.09	12	0.01	
Starfish red A	0.05	12	0.00	
Lophius vomerinus	0.04	12	0.00	981
Ophiuroidea	0.02	12	0.00	
Total	1102.04		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Dead coral	1607.96	0	47.55	
Merluccius paradoxus	900.90	2507	26.64	1002
Merluccius paradoxus	388.06	233	11.48	1005
Genypteris capensis	123.38	66	3.65	1000
Helicolenus dactylopterus	107.46	279	3.18	999
Merluccius capensis	48.36	14	1.43	1006
Lophius vomerinus	30.45	14	0.90	1001
Squalus mitsukurii	28.26	10	0.84	
Bassanago albescens	23.08	32	0.68	
Hydrolagus sp.	17.11	16	0.51	
Scyliorhinus capensis	14.93	10	0.44	
Centrolophus niger	13.93	4	0.41	
Malacocephalus laevis	13.89	37	0.41	
Merluccius paradoxus	11.94	12	0.35	1004
Ruvettus pretiosus	9.95	4	0.29	
Hoplostethus mediterraneus	5.03	74	0.15	
Holohalaelurus regani	4.38	10	0.13	
Rochinia sp.	4.35	484	0.13	
Rossia enigmatica	3.83	148	0.11	
Starfish - fleshy	3.58	19	0.11	
Brama brama	3.18	2	0.09	1007
Anemones, white	3.05	37	0.09	
Cruriraja parcomaculata	2.87	4	0.08	
Starfish white 5 arms	2.47	261	0.07	
Octopus magnificus	2.39	2	0.07	
Todarodes angolensis	1.99	2	0.06	1003
Lucigadus ori	1.86	279	0.05	
Parapagurus pilosimanus	1.04	93	0.03	
Epigonus telescopus	0.61	157	0.02	
Sponges - round	0.56	37	0.02	
Photichthys argenteus	0.17	19	0.00	
Paracallionymus costatus	0.17	37	0.00	
Whelks	0.17	19	0.00	
Stereomastis sp.	0.15	19	0.00	
Lamp shell	0.13	19	0.00	
Amalda bullioides	0.04	19	0.00	
Total	3381.66		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 98  
 DATE :14/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°26.34  
 start stop duration Purpose : 3  
 TIME :10:20:23 10:53:40 33.3 (min) Lon E 15°56.82  
 LOG : 2249.68 2251.25 1.6 Region : 6100  
 FDEPTH: 515 518 Gear cond.: 0  
 BDEPTH: 515 518 Validity : 0  
 Towing dir: 0° Wire out : 1250 m Speed : 2.8 km  
 Sorted : 711 Total catch: 715.09 Catch/hour: 1289.61

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 100  
 DATE :14/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°20.95  
 start stop duration Purpose : 3  
 TIME :15:50:03 16:20:24 30.4 (min) Lon E 15°48.85  
 LOG : 2276.71 2278.38 1.7 Region : 6100  
 FDEPTH: 554 549 Gear cond.: 0  
 BDEPTH: 554 549 Validity : 0  
 owing dir: 0° Wire out : 1380 m Speed : 3.3 km  
 Sorted : 383 Total catch: 390.62 Catch/hour: 772.22

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	548.24	1273	42.51	1008
Merluccius paradoxus	313.80	492	24.33	1014
Merluccius paradoxus	54.10	106	4.20	1015
Starfish - many arms	53.10	11800	4.12	
Lophius vomerinus	52.30	22	4.06	1013
Ruvettus pretiosus	37.87	7	2.94	
Raja doutreii, male	36.07	2	2.80	
Helicolenus dactylopterus	35.71	150	2.77	1009
Dead coral	19.84	0	1.54	
Coelorinchus braueri	18.94	142	1.47	
Hydrolagus sp.	17.31	31	1.34	
Selachophidium guentheri	15.15	216	1.17	
Bathyraja smithii	12.62	2	0.98	
Malacocephalus laevis	9.02	29	0.70	
Coelorinchus simorhynchus	8.40	74	0.65	
Bassanago albescens	7.39	34	0.57	
Raja leopardus	5.41	9	0.42	
Raja confundens	5.41	7	0.42	
Coelorinchus matamua	4.74	20	0.37	
Genypterus capensis	3.97	2	0.31	1010
Holohalaelurus regani	3.25	7	0.25	
Notacanthus sexspinis	2.94	79	0.23	
Funchalia woodwardi	2.55	339	0.20	
Anemones, pink	2.31	5	0.18	
Anemones, white	2.15	13	0.17	
Nezumia sp.	2.09	18	0.16	
Rochinia sp.	2.04	298	0.16	
Whelks	1.97	43	0.15	
Rossia enigmatica	1.84	106	0.14	
Todarodes angolensis	1.66	4	0.13	1011
Todarodes angolensis	1.51	2	0.12	1012
Starfish white 5 arms	1.13	43	0.09	
Starfish yellow/orange	1.08	22	0.08	
Mollusc eggs	0.76	43	0.06	
Paracallionymus costatus	0.70	106	0.05	
Shark eggs	0.38	22	0.03	
Photichthys argenteus	0.36	25	0.03	
Psychrolutes macrocephalus	0.31	2	0.02	
Lycoteuthis lorigera	0.27	25	0.02	
Bristle worms (straws)	0.25	63	0.02	
Epigonus telescopus	0.17	5	0.01	
Hoplostethus mediterraneus	0.14	5	0.01	
Myxine capensis	0.13	2	0.01	
Lucigadus ori	0.10	14	0.01	
Chaceon maritae	0.08	4	0.01	
Raja leopardus, juvenile	0.03	2	0.00	
Sipunculida	0.01	2	0.00	
Total	1289.61		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	413.18	631	53.51	1024
Ruvettus pretiosus	112.69	10	14.59	
Merluccius paradoxus	47.45	79	6.14	1025
Starfish - many arms	31.88	9108	4.13	
Helicolenus dactylopterus	26.89	113	3.48	1020
Selachophidium guentheri	26.56	370	3.44	
Lophius vomerinus	26.10	8	3.38	1021
Chaceon maritae	25.11	285	3.25	
Coelorinchus braueri	16.80	198	2.18	
Raja leopardus	7.91	10	1.02	
Funchalia woodwardi	6.79	666	0.88	
Malacocephalus laevis	6.25	24	0.81	
Anemones, pink	6.13	0	0.79	
Hydrolagus sp.	3.56	8	0.46	
Photichthys argenteus	2.51	170	0.32	
Rossia enigmatica	2.22	117	0.29	
Nezumia sp.	2.10	43	0.27	
Bathypolypus valdiviae	1.87	21	0.24	
Bassanago albescens	1.70	4	0.22	
Todarodes angolensis	1.23	2	0.16	1022
Todarodes angolensis	0.99	2	0.13	1023
Raja confundens	0.79	4	0.10	
Malacocephalus niger	0.38	11	0.05	
Whelks	0.38	11	0.05	
Starfish white 5 arms	0.32	11	0.04	
Notacanthus sexspinis	0.23	11	0.03	
Tripteryphycis gilchristi	0.22	11	0.03	
Total	772.22		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 101  
 DATE :15/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°13.97  
 start stop duration Purpose : 3  
 TIME :04:59:01 05:29:15 30.2 (min) Lon E 15°52.50  
 LOG : 2312.64 2314.17 1.5 Region : 6100  
 FDEPTH: 484 485 Gear cond.: 0  
 BDEPTH: 484 485 Validity : 0  
 Towing dir: 0° Wire out : 1200 m Speed : 3.0 km  
 Sorted : 313 Total catch: 466.67 Catch/hour: 925.94

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	347.22	854	37.50	1031
Merluccius paradoxus	190.48	202	20.57	1033
Lophius vomerinus	83.33	44	9.00	1028
Helicolenus dactylopterus	67.46	218	7.29	1026
Merluccius paradoxus	43.65	58	4.71	1032
Ruvettus pretiosus	37.70	8	4.07	
Parapagurus pilosimanus	26.59	984	2.87	
Genypterus capensis	21.83	8	2.36	1027
Coelorinchus simorhynchus	21.83	218	2.36	
Bassanago albescens	18.06	28	1.95	
Raja leopardus	14.09	8	1.52	
Starfish - many arms	13.13	3284	1.42	
Raja confundens	11.11	12	1.20	
Hydrolagus sp.	8.33	12	0.90	
Anemones, white	3.72	28	0.40	
Malacocephalus laevis	3.11	14	0.34	
Rossia enigmatica	2.74	119	0.30	
Holohalaelurus regani	1.98	6	0.21	
Lucigadus ori	1.68	161	0.18	
Selachophidium guentheri	1.63	21	0.18	
Starfish white 5 arms	1.33	91	0.14	
Todarodes angolensis	0.79	2	0.09	1029
Todarodes angolensis	0.71	2	0.08	1030
Hoplostethus mediterraneus	0.53	7	0.06	
Sponges - round	0.49	14	0.05	
Paracallionymus costatus	0.43	105	0.05	
Photichthys argenteus	0.35	35	0.04	
Stereomastix sp.	0.27	35	0.03	
Coelorinchus braueri	0.26	28	0.03	
Ophichthus bennettai	0.24	2	0.03	
Whelks	0.24	7	0.03	
Starfish red A	0.15	7	0.02	
Lycoteuthis lorigera	0.11	7	0.01	
Chaceon maritae	0.10	7	0.01	
Gastropod nei	0.07	14	0.01	
Anemones, pink	0.06	7	0.01	
Physiculus capensis	0.06	7	0.01	
Hydrolagus sp., juvenile	0.05	7	0.01	
Shrimps, small, non comm.	0.02	7	0.00	
Stoloteuthis sp.	0.02	7	0.00	
Rochinia sp.	0.01	7	0.00	
Total	925.94		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 99  
 DATE :14/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°29.84  
 start stop duration Purpose : 3  
 TIME :12:55:00 13:25:08 30.1 (min) Lon E 15°43.11  
 LOG : 2264.15 2265.80 1.7 Region : 6100  
 FDEPTH: 663 665 Gear cond.: 0  
 BDEPTH: 518 665 Validity : 0  
 Towing dir: 0° Wire out : 1450 m Speed : 3.3 km  
 Sorted : 240 Total catch: 240.22 Catch/hour: 478.36

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Coelorinchus braueri	127.45	1274	26.64	
Merluccius paradoxus	95.59	62	19.98	1019
Chaceon maritae	55.76	655	11.66	
Deania calcea	53.77	10	11.24	
Histioteuthis miranda	26.88	22	5.62	
Nezumia sp.	12.74	139	2.66	
Centrophorus squamosus, female	10.95	2	2.29	
Starfish - many arms	10.28	2507	2.15	
Trachyscorpia eschmeyerii	9.76	14	2.04	1018
Coelorinchus matamua	9.36	42	1.96	
Sergia sp.	7.71	1713	1.61	
Selachophidium guentheri	7.05	94	1.47	
Lophius vomerinus	6.77	2	1.42	1017
Histioteuthis macrohista	6.13	82	1.28	
Raja leopardus	5.97	8	1.25	
Photichthys argenteus	4.30	106	0.90	
Malacocephalus laevis	3.98	16	0.83	
Etmopterus brachyurus	3.60	56	0.75	
Funchalia woodwardi	3.31	414	0.69	
Bristle worms (straws)	3.21	697	0.67	
Anemones, pink	1.99	10	0.42	
Todarodes angolensis	1.87	2	0.39	1016
Dead coral	1.65	0	0.35	
Bathypolypus valdiviae	1.47	16	0.31	
Neoscopelus macrolepidotus	1.35	40	0.28	
Raja confundens	1.10	6	0.23	
Psychrolutes macrocephalus	0.64	8	0.13	
Lycodes agulhensis	0.58	6	0.12	
Rochinia sp.	0.43	62	0.09	
Bathophilus sp.	0.34	10	0.07	
Rossia enigmatica	0.31	20	0.06	
Notacanthus sexspinis	0.27	10	0.06	
Gymnoscopelus sp.	0.27	40	0.06	
Oreosoma atlanticum	0.22	4	0.05	
Chauliodus sloani	0.20	10	0.04	
Lampanyctodes sp.	0.17	4	0.04	
Xenodermichthys copei	0.14	6	0.03	
Symbolophorus boops	0.13	10	0.03	
Myxine capensis	0.13	2	0.03	
Hoplostethus mediterraneus	0.12	8	0.03	
Leptocephalus	0.08	2	0.02	
Scopelosaurus herwigi	0.08	4	0.02	
Diretmus argenteus	0.07	2	0.02	
Hydrolagus sp.	0.04	2	0.01	
Spirula spirula	0.04	4	0.01	
Paracallionymus costatus	0.02	4	0.00	
Electrona risso	0.02	2	0.00	
Bathyraja smithii, juvenile	0.02	2	0.00	
Lepidion capensis	0.01	2	0.00	
MYCTOPHIDAE	0.01	2	0.00	
Total	478.36		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 102  
 DATE :15/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 31°4.01  
 start stop duration Purpose : 3  
 TIME :07:38:01 08:08:14 30.2 (min) Lon E 15°58.38  
 LOG : 2328.93 2330.52 1.6 Region : 6100  
 FDEPTH: 357 354 Gear cond.: 0  
 BDEPTH: 357 354 Validity : 0  
 Towing dir: 0° Wire out : 875 m Speed : 3.2 km  
 Sorted : 689 Total catch: 922.79 Catch/hour: 1832.14

SPECIES	weight	numbers	% OF TOT. C	SAMP
Zeus capensis	814.03	1737	44.43	1034
Merluccius paradoxus	192.59	1380	10.51	1043
Coelorinchus simorhynchus	186.63	3393	10.19	
Parapagurus dimorphus	69.49	12191	3.79	
Merluccius capensis	68.50	30	3.74	1039
Helicolenus dactylopterus	57.58	276	3.14	1037
Merluccius paradoxus	52.81	40	2.88	1041
Merluccius paradoxus	48.64	52	2.65	1042
Malacocephalus laevis	44.67	79	2.44	
Epigonus telescopus	34.75	754	1.90	
Brama brama	34.15	38	1.86	1035
Squalus mitsukurii	33.16	26	1.81	
Scyllorhinus capensis	22.63	36	1.24	
Ruvettus pretiosus	21.84	2	1.19	
Holohalaelurus regani	19.85	40	1.08	
Starfish - many arms	17.87	5105	0.98	
Genypterus capensis	17.47	20	0.95	1036
Callorhynchus capensis	15.09	4	0.82	
Lepidopus caudatus	12.31	22	0.67	
Thyrsites atun	11.52	4	0.63	1040
Lophius vomerinus	7.15	6	0.39	1045
Cyttus traversi	5.70	30	0.31	1046
Starfish - fleshy	5.58	20	0.30	
Mustelus palumbes	5.36	2	0.29	
Beryx splendens	4.77	24	0.26	1044
Anemones, pink	4.14	10	0.23	
Merluccius capensis	3.97	2	0.22	1038
Todaropsis eblanae	3.30	30	0.18	1049
Starfish white 5 arms	2.98	318	0.16	
Anemones, white	2.54	10	0.14	
Hoplostethus mediterraneus	2.39	40	0.13	
Parapagurus pilosimanus	1.75	79	0.10	
Spatangus capensis	1.59	20	0.09	
Paracallionymus costatus	1.32	189	0.07	
Cynoglossus zanzibarensis	1.20	20	0.07	1047
Rossia enigmatica	0.91	40	0.05	
Todaropsis eblanae	0.84	10	0.05	1048
Gastropod nei	0.31	20	0.02	
Sepia hieronis	0.31	10	0.02	
Exodromidia sp.	0.21	20	0.01	
Sepia sp. New SA	0.13	20	0.01	
Starfish - red C	0.09	10	0.00	
Sepia roboni	0.04	10	0.00	
Total	1832.14		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 103  
 DATE :15/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°52.18  
 start stop duration Purpose : 3  
 TIME :11:47:15 12:12:50 25.6 (min) Lon E 16°24.30  
 LOG : 2361.36 2362.67 1.3 Region : 6100  
 FDEPTH: 273 271 Gear cond.: 0  
 BDEPTH: 273 271 Validity : 0  
 Towing dir: 0° Wire out : 690 m Speed : 3.0 km  
 Sorted : 248 Total catch: 248.00 Catch/hour: 581.70

SPECIES	weight	numbers	% OF TOT. C	SAMP
Zeus capensis	169.12	511	29.07	1050
Lepidopus caudatus	95.00	178	16.33	
Coelorinchus simorhynchus	83.27	1982	14.31	
Squalus mitsukurii	32.37	54	5.56	
Emmelichthys nitidus	30.96	429	5.32	
Helicolenus dactylopterus	25.10	223	4.31	1055
Merluccius paradoxus	20.41	251	3.51	1052
Callorhynchus capensis	14.07	5	2.42	
Chelidonichthys queketti	14.07	80	2.42	1054
Starfish white 5 arms	13.60	2566	2.34	
Merluccius capensis	13.37	12	2.30	1058
Lophius vomerinus	9.85	5	1.69	1053
Holohalaelurus regani	9.38	47	1.61	
Raja straeleni	6.10	5	1.05	
Brama brama	5.86	5	1.01	1051
Merluccius capensis	4.93	5	0.85	1057
Todaropsis eblanae	4.69	47	0.81	1061
Todaropsis eblanae	4.08	42	0.70	1060
Starfish - many arms	2.74	500	0.47	
Merluccius paradoxus	2.58	2	0.44	1056
Cynoglossus zanzibarensis	2.44	47	0.42	1062
Malacocephalus laevis	2.35	16	0.40	
Spatangus capensis	1.92	19	0.33	
Rossia enigmatica	1.87	94	0.32	
Bathypolypus valdiviae	1.85	2	0.32	
Raja wallacei	1.64	2	0.28	
Paracallionymus costatus	1.49	124	0.26	
URCHINS	1.46	101	0.25	
Parapagurus dimorphus	1.08	258	0.19	
Epigonus telescopus	0.90	12	0.15	
Todarodes angolemsis	0.89	2	0.15	1059
Trachurus capensis	0.34	2	0.06	1065
J E L Y F I S H	0.32	0	0.05	
Sepia hieronis	0.30	7	0.05	
Helicolenus dactylopterus	0.20	23	0.03	1063
Sepia australis	0.20	9	0.03	
Giant bullia gastropod	0.15	2	0.03	
Todaropsis eblanae	0.14	12	0.02	1064
Sponges - loose	0.13	2	0.02	
Merluccius paradoxus	0.10	16	0.02	1066
Rochinia sp.	0.06	14	0.01	
Physiculus capensis	0.05	5	0.01	
Anemones, yellow	0.05	5	0.01	
Champsodon capensis	0.04	5	0.01	
Starfish - red C	0.04	2	0.01	
Aphrodite pol	0.03	9	0.01	
Sepia sp. New SA	0.03	5	0.01	
Nudibranchs	0.02	2	0.00	
Sepia typica	0.02	5	0.00	
Exodromidia sp.	0.01	2	0.00	
Pecten sp.	0.01	5	0.00	
Total	581.70		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 104  
 DATE :15/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°44.88  
 start stop duration Purpose : 3  
 TIME :14:32:20 15:02:18 30.0 (min) Lon E 16°41.43  
 LOG : 2381.27 2382.90 1.6 Region : 6100  
 FDEPTH: 232 228 Gear cond.: 0  
 BDEPTH: 232 228 Validity : 0  
 Towing dir: 0° Wire out : 580 m Speed : 3.3 km  
 Sorted : 151 Total catch: 168.63 Catch/hour: 337.60

SPECIES	weight	numbers	% OF TOT. C	SAMP
Zeus capensis	128.13	331	37.95	1067
Parapagurus dimorphus	39.24	2617	11.62	
Merluccius capensis	23.22	24	6.88	1076
Spatangus capensis	21.52	160	6.37	
Lophius vomerinus	19.42	40	5.75	1069
Merluccius paradoxus	14.61	234	4.33	1073
Chelidonichthys capensis	11.41	16	3.38	1071
Mustelus palumbes	11.01	4	3.26	
Raja straeleni	7.81	6	2.31	
Squalus mitsukurii	7.61	10	2.25	
Merluccius capensis	5.89	6	1.74	1077
Heart urchin	5.40	150	1.60	
Sepia australis	5.13	410	1.52	
Emmelichthys nitidus	3.47	20	1.03	
Genypterus capensis	3.40	14	1.01	1068
Helicolenus dactylopterus	3.20	94	0.95	1074
Paracallionymus costatus	3.00	170	0.89	
Todaropsis eblanae	3.00	48	0.89	1079
Strumens whiteheadi	2.92	46	0.87	
Brama brama	2.60	4	0.77	1070
Starfish white 5 arms	2.45	523	0.73	
Holohalaelurus regani	2.16	12	0.64	
Congiopterus spinifer	2.00	8	0.59	
Todaropsis eblanae	1.80	36	0.53	1078
Cynoglossus zanzibarensis	1.46	20	0.43	1083
Todaropsis eblanae	1.05	70	0.31	1081
Loligo reynaudi	1.04	2	0.31	1075
Sea pens	0.64	4	0.19	
Merluccius paradoxus	0.60	74	0.18	1080
Chelidonichthys queketti	0.60	4	0.18	1072
Starfish - red D	0.47	2	0.14	
Exodromidia sp.	0.45	20	0.13	
Lophius vomerinus	0.29	20	0.09	1082
Sepia hieronis	0.28	20	0.08	
Rossia enigmatica	0.13	10	0.04	
Starfish red A	0.10	10	0.03	
Starfish - purple	0.04	10	0.01	
Helicolenus dactylopterus	0.02	10	0.01	
Total	337.60		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 105  
 DATE :15/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°36.34  
 start stop duration Purpose : 3  
 TIME :17:04:19 17:34:28 30.2 (min) Lon E 16°52.07  
 LOG : 2396.05 2397.78 1.7 Region : 6100  
 FDEPTH: 193 193 Gear cond.: 0  
 BDEPTH: 193 193 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 3.4 km  
 Sorted : 133 Total catch: 441.51 Catch/hour: 878.34

SPECIES	weight	numbers	% OF TOT. C	SAMP
Merluccius paradoxus	447.61	13317	50.96	1088
Sponges - yellow	159.15	0	18.12	
Sepia australis	119.96	5998	13.66	
Lampanyctodes hectoris	41.18	13727	4.69	
JELLYFISH	35.81	0	4.08	
Zeus capensis	12.53	32	1.43	1084
Merluccius capensis	7.16	36	0.82	1093
Parapagurus dimorphus	7.04	382	0.80	
Raja wallacei	6.96	4	0.79	
Paracallionymus costatus	5.16	462	0.59	
Pterygosquilla armata capensis	5.05	346	0.57	
Raja straeleni	4.77	2	0.54	
Exodromidia sp.	3.72	233	0.42	
Congiopterus spinifer	3.46	36	0.39	
Helicolenus dactylopterus	3.40	251	0.39	1090
Heart urchin	2.47	143	0.28	
Merluccius paradoxus	2.33	251	0.26	1089
Starfish - red D	1.99	4	0.23	
Chelidonichthys capensis	1.51	6	0.17	1085
Turritella	1.24	161	0.14	
Coelorinchus simorhynchus	1.15	125	0.13	
Holohalaelurus regani	0.79	18	0.09	
Spatangus capensis	0.77	18	0.09	
Todarodes angolemsis	0.68	2	0.08	1087
Lophius vomerinus	0.64	36	0.07	1092
Genypterus capensis	0.52	4	0.06	1086
Sea pens	0.40	2	0.05	
Cynoglossus zanzibarensis	0.38	18	0.04	1091
Aphrodite pol	0.21	18	0.02	
Starfish - purple	0.16	36	0.02	
Solenocera sp.	0.14	18	0.02	
Total	878.34		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 106  
 DATE :16/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°15.31  
 start stop duration Purpose : 3  
 TIME :04:49:25 05:19:50 30.4 (min) Lon E 16°58.05  
 LOG : 2464.51 2466.03 1.5 Region : 6100  
 FDEPTH: 150 151 Gear cond.: 0  
 BDEPTH: 150 151 Validity : 0  
 Towing dir: 0° Wire out : 450 m Speed : 3.0 km  
 Sorted : 62 Total catch: 278.85 Catch/hour: 549.99

SPECIES	weight	numbers	% OF TOT. C	SAMP
Pterygosquilla armata capensis	186.82	16984	33.97	
JELLYFISH	142.01	0	25.82	
Merluccius paradoxus	74.16	2525	13.48	1100
Sepia australis	25.88	1097	4.71	
Heart urchin	19.25	394	3.50	
Callorhynchus capensis	11.83	6	2.15	
Brama brama	11.64	8	2.12	1094
Merluccius capensis	11.05	81	2.01	1105
Todaropsis eblanae	10.26	394	1.86	1102
Genypterus capensis	9.27	83	1.69	1097
Thyrsites atun	6.51	4	1.18	1099
Sepia hieronis	6.31	126	1.15	
Chelidonichthys capensis	4.93	18	0.90	1096
Whelks	4.18	79	0.76	
Sufflogobius bibarbus	3.94	858	0.72	
Helicolenus dactylopterus	3.63	158	0.66	1101
Lophius vomerinus	3.35	14	0.61	1098
Raja straeleni	2.96	2	0.54	
Gastropod nei	2.18	174	0.40	
Cynoglossus zanzibarensis	1.88	32	0.34	1104
Macropodus australis	1.86	95	0.34	
Maurollicus muelleri	1.85	1231	0.34	
Starfish red A	1.20	331	0.22	
Exodromidia sp.	1.07	110	0.20	
Paracallionymus costatus	0.71	174	0.13	
Holohalaelurus regani	0.49	16	0.09	
Merluccius paradoxus	0.39	47	0.07	1103
Jasus lalandii	0.22	2	0.04	1095
Starfish - purple	0.16	16	0.03	
Total	549.99		100.00	



R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 107  
 DATE :16/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°17.09  
 start stop duration Purpose : 3  
 TIME :06:49:17 07:19:34 30.3 (min) Lon E 16°46.21  
 LOG : 2476.93 2478.52 1.6 Region : 6100  
 FDEPTH: 186 187 Gear cond.: 0  
 BDEPTH: 186 187 Validity : 0  
 Towing dir: 0° Wire out : 450 m Speed : 3.2 km  
 Sorted : 62 Total catch: 127.05 Catch/hour: 251.75

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	115.32	2919	45.81	1113
Brama brama	23.18	18	9.21	1107
Raja pullopectata, male	17.83	2	7.08	
Pterygosquilla armata capensis	13.97	1662	5.55	
J E L L Y F I S H	11.89	0	4.72	
Helicolenus dactylopterus	11.89	678	4.72	1114
Sepia australis	10.17	489	4.04	
Todaropsis eblanae	8.32	250	3.31	1115
Holohalaelurus regani	4.72	123	1.87	
Heart urchin	4.52	101	1.79	
Chelidonichthys capensis	3.37	8	1.34	1111
Starfish - fleshy A	3.17	18	1.26	
Paracallionymus costatus	2.26	297	0.90	
Merluccius capensis	2.18	10	0.87	1109
Lophius vomerinus	2.02	71	0.80	1116
Cynoglossus zanzibarensis	1.98	30	0.79	1108
Coelorinchus simorhynchus	1.92	119	0.76	
Maurollicus muelleri	1.85	13205	0.73	
Macropipus australis	1.78	65	0.71	
Genypterus capensis	1.78	16	0.71	1110
Merluccius paradoxus	1.31	143	0.52	1117
Whelks	0.84	12	0.34	
Starfish red A	0.83	196	0.33	0
Gastropod nei	0.62	24	0.25	
Spatangus capensis	0.55	6	0.22	
Lophius vomerinus	0.48	2	0.19	1112
Lampanyctodes hectoris	0.34	107	0.13	
Octopus vulgaris	0.34	2	0.13	
Exodromidia sp.	0.31	30	0.12	
URCHINS	0.30	2	0.12	
Turritella	0.29	36	0.11	
Mursia cristimanus	0.25	24	0.10	
Starfish - many arms	0.24	18	0.10	
Congiopodus spinifer	0.22	2	0.09	
Amalda bulloides	0.20	30	0.08	
Starfish - yellow A	0.19	12	0.08	
Starfish - purple	0.17	24	0.07	
Physiculus capensis	0.10	18	0.04	
Lolligoncula mercatoris	0.05	18	0.02	
Total	251.75		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 108  
 DATE :16/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°24.61  
 start stop duration Purpose : 3  
 TIME :09:43:40 10:14:08 30.5 (min) Lon E 16°33.79  
 LOG : 2494.82 2496.40 1.6 Region : 6100  
 FDEPTH: 213 214 Gear cond.: 0  
 BDEPTH: 213 214 Validity : 0  
 Towing dir: 0° Wire out : 540 m Speed : 3.1 km  
 Sorted : 78 Total catch: 226.33 Catch/hour: 445.68

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	289.47	5143	64.95	1123
Spatangus capensis	35.84	325	8.04	
Lophius vomerinus	16.34	24	3.67	1118
J E L L Y F I S H	15.52	0	3.48	
Helicolenus dactylopterus	12.27	606	2.75	1124
Anemones, red	11.72	317	2.63	
Paracallionymus costatus	9.59	1213	2.15	
Coelorinchus simorhynchus	6.06	173	1.36	
Merluccius capensis	6.06	12	1.36	1121
Genypterus capensis	5.32	28	1.19	1119
Heart urchin	5.18	236	1.16	
Lampanyctodes hectoris	4.47	1802	1.00	
Sepia australis	4.27	189	0.96	
Callorhynchus capensis	3.07	2	0.69	
Chelidonichthys capensis	2.76	6	0.62	1120
Cynoglossus zanzibarensis	2.76	62	0.62	1125
Pterygosquilla armata capensis	2.65	323	0.60	
Todaropsis eblanae	2.48	48	0.56	1126
Lepidopus caudatus	1.93	7	0.43	
Holohalaelurus regani	1.52	14	0.34	
Maurollicus muelleri	1.34	1099	0.30	
Todarodes angolensis	0.91	2	0.20	1122
Whelks	0.81	14	0.18	
Merluccius paradoxus	0.70	117	0.16	1127
Lophius vomerinus	0.47	34	0.11	1128
Sepia hieronis	0.47	14	0.11	
Congiopodus spinifer	0.43	4	0.10	
Starfish - fleshy	0.39	7	0.09	
Macropipus australis	0.33	14	0.07	
G A S T R O P O D S	0.19	14	0.04	
Parapagurus dimorphus	0.15	14	0.03	
Starfish - purple	0.08	14	0.02	
Rossia enigmatica	0.06	7	0.01	
Turritella	0.06	7	0.01	
Lolligoncula mercatoris	0.04	14	0.01	
Total	445.68		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 109  
 DATE :16/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°33.41  
 start stop duration Purpose : 3  
 TIME :13:00:37 13:30:38 30.0 (min) Lon E 16°18.45  
 LOG : 2515.13 2516.67 1.6 Region : 6100  
 FDEPTH: 245 243 Gear cond.: 0  
 BDEPTH: 245 243 Validity : 0  
 Towing dir: 0° Wire out : 620 m Speed : 3.1 km  
 Sorted : 115 Total catch: 569.60 Catch/hour: 1138.44

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	711.53	11330	62.50	1137
Helicolenus dactylopterus	91.62	1503	8.05	1136
Coelorinchus simorhynchus	56.60	0	4.97	

Spatangus capensis	47.97	716	4.21	
J E L L Y F I S H	37.42	0	3.29	
Sepia australis	32.94	1819	2.89	
Merluccius capensis	26.18	24	2.30	1134
Todaropsis eblanae	17.27	1775	1.52	1140
Lophius vomerinus	16.99	18	1.49	1131
Squalus mitsukurii	12.99	4	1.14	
Lampanyctodes hectoris	12.79	3761	1.12	
Cynoglossus zanzibarensis	10.07	240	0.88	1138
Ascidans	8.76	618	0.77	
Raja straeleni	7.99	4	0.70	
Callorhynchus capensis	7.00	2	0.61	
Merluccius capensis	6.80	8	0.60	1135
Genypterus capensis	6.80	18	0.60	1129
Mustelus palumbes, male	6.20	2	0.54	
Heart urchin	3.07	112	0.27	
Holohalaelurus regani	2.80	18	0.25	
Paracallionymus costatus	2.49	432	0.22	
Sponges - round	2.32	16	0.20	
Merluccius paradoxus	2.20	4	0.19	1132
Chelidonichthys queketti	1.88	12	0.17	1133
Nudibranchs	1.77	80	0.16	
Merluccius paradoxus	1.12	176	0.10	1139
Gastropod nei	0.77	48	0.07	
Sea pens	0.76	6	0.07	
Starfish white 5 arms	0.72	64	0.06	
Congiopodus spinifer	0.56	8	0.05	
Sepia sp. New SA	0.08	16	0.01	
Total	1138.44		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 110  
 DATE :16/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°41.48  
 start stop duration Purpose : 3  
 TIME :16:04:51 16:34:54 30.1 (min) Lon E 16°3.52  
 LOG : 2534.36 2535.91 1.6 Region : 6100  
 FDEPTH: 207 205 Gear cond.: 0  
 BDEPTH: 207 205 Validity : 0  
 Towing dir: 0° Wire out : 560 m Speed : 3.1 km  
 Sorted : 571 Total catch: 840.68 Catch/hour: 1678.56

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Emmelichthys nitidus	614.98	11826	36.64	
Zeus capensis	393.34	1739	23.43	1130
Squalus megalops	236.61	483	14.10	
Merluccius capensis	131.78	84	7.85	1141
Merluccius capensis	75.87	64	4.52	1143
Lophius vomerinus	62.90	30	3.75	1150
Callorhynchus capensis	27.95	8	1.67	
Chelidonichthys capensis	21.16	26	1.26	1146
Todaropsis eblanae	21.08	406	1.26	1151
Trachurus capensis	15.97	40	0.95	1144
Spatangus capensis	15.37	110	0.92	
Helicolenus dactylopterus	15.17	152	0.90	1145
Congiopodus spinifer	9.18	4	0.55	
Chelidonichthys queketti	8.39	34	0.50	1147
Raja wallacei	8.15	2	0.49	
Brama brama	5.79	4	0.34	1148
Raja straeleni	4.19	2	0.25	
Thyrssites atun	3.00	4	0.18	1142
Whelks	2.70	44	0.16	
Cynoglossus zanzibarensis	1.65	77	0.10	1153
Loligo reynaudii	1.36	2	0.08	1149
Helicolenus dactylopterus	0.66	99	0.04	1152
Holohalaelurus regani	0.54	0	0.03	
Starfish - many arms	0.40	11	0.02	
Paracallionymus costatus	0.29	33	0.02	
Congiopodus spinifer	0.08	2	0.00	0
Total	1678.56		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 111  
 DATE :17/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°30.01  
 start stop duration Purpose : 3  
 TIME :04:51:35 05:22:52 31.3 (min) Lon E 15°23.91  
 LOG : 2613.59 2615.17 1.6 Region : 6100  
 FDEPTH: 302 302 Gear cond.: 0  
 BDEPTH: 302 302 Validity : 0  
 Towing dir: 0° Wire out : 750 m Speed : 3.0 km  
 Sorted : 439 Total catch: 1114.77 Catch/hour: 2138.31

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1053.07	7822	49.25	1162
Zeus capensis	264.71	605	12.38	1154
Epigonus telescopus	196.80	3171	9.20	
Merluccius capensis	118.93	54	5.56	1155
Coelorinchus simorhynchus	106.00	898	4.96	
Callorhynchus capensis	51.79	15	2.42	
Merluccius paradoxus	44.12	42	2.06	1157
Malacocephalus laevis	37.98	69	1.78	
Lophius vomerinus	33.38	15	1.56	1167
Holohalaelurus regani	30.69	84	1.44	
Genypterus capensis	29.73	38	1.39	1160
Merluccius capensis	24.94	15	1.17	1156
Squalus mitsukurii	20.14	19	0.94	
Helicolenus dactylopterus	19.76	125	0.92	1159
Todaropsis eblanae	14.16	86	0.66	1164
Anemones, pink	13.90	138	0.65	
Starfish white 5 arms	12.95	3597	0.61	
Heart urchin	12.26	397	0.57	
Merluccius paradoxus	10.17	12	0.48	1158
Thyrssites atun	9.59	4	0.45	1161
Raja wallacei	7.10	4	0.33	
Raja confundens	5.18	4	0.24	
Spatangus capensis	3.21	35	0.15	
Sea pens	2.30	8	0.11	
Notopogon macrosolen	2.09	17	0.10	
Cynoglossus zanzibarensis	1.99	35	0.09	1166
Raja straeleni	1.82	2	0.09	
Galeus polli	1.92	10	0.09	
Paracallionymus costatus	1.66	190	0.08	
Todarodes angolensis	1.42	2	0.07	1163
Squalus acanthias	1.23	2	0.06	
Sepia hieronis	1.01	35	0.05	
Merluccius paradoxus	0.98	121	0.05	1165
Lepidopus caudatus	0.50	2	0.02	
Rossia enigmatica	0.35	52	0.02	
Sepia sp. New SA	0.16	17	0.01	
Mursia cristimanus	0.14	17	0.01	
Exodromidia sp.	0.14	17	0.01	
Total	2138.31		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 112  
 DATE :17/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°39.47  
 start stop duration Purpose : 3  
 TIME :06:55:12 07:15:08 19.9 (min) Lon E 15°23.71  
 LOG : 2624.19 2625.21 1.0 Region : 6100  
 FDEPTH: 353 350 Gear cond.: 0  
 BDEPTH: 353 350 Validity : 0  
 Towing dir: 0° Wire out : 875 m Speed : 3.1 km  
 Sorted : 184 Total catch: 204.35 Catch/hour: 614.88

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 114  
 DATE :17/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°43.45  
 start stop duration Purpose : 3  
 TIME :10:25:24 10:56:01 30.6 (min) Lon E 15°20.18  
 LOG : 2637.07 2638.62 1.6 Region : 6100  
 FDEPTH: 629 612 Gear cond.: 0  
 BDEPTH: 629 612 Validity : 0  
 Towing dir: 0° Wire out : 1400 m Speed : 3.0 km  
 Sorted : 113 Total catch: 310.99 Catch/hour: 609.58

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	135.41	545	22.02	1169
Merluccius paradoxus	96.29	93	15.66	1173
Coelorinchus simorhynchus	65.60	1059	10.67	
Squalus acanthias	37.61	48	6.12	
Genypterus capensis	33.10	45	5.38	1170
Merluccius capensis	33.10	15	5.38	1174
Zeus capensis	27.08	57	4.40	1168
Merluccius paradoxus	26.18	33	4.26	1172
Epigonus telescopus	23.31	1456	3.79	
Spatangus capensis	20.83	220	3.39	
Aphrodite pol	19.09	7953	3.10	
Helicolenus dactylopterus	15.95	45	2.59	1175
Squalus mitsukurii	14.26	12	2.32	
Malacocephalus laevis	14.14	27	2.30	
Lophius vomerinus	9.93	6	1.61	1171
Starfish white 5 arms	8.35	2257	1.36	
Sponges - spiky	7.52	3	1.22	
Dead coral	3.12	0	0.51	
Raja confundens	3.01	3	0.49	
Anemones, pink	2.66	72	0.43	
Holohalaelurus regani	2.53	6	0.41	
Rossia enigmatica	2.16	102	0.35	
Symbolophorus boops	1.94	120	0.32	
Todarodes angolensis	1.75	3	0.28	1176
Paracallionymus costatus	1.51	244	0.25	
Todaropsis eblanae	1.37	9	0.22	1178
Todaropsis eblanae	1.12	9	0.18	1179
Bassanago albescens	0.96	3	0.16	
Whelks	0.91	18	0.15	
Mursia cristimanus	0.89	81	0.14	
Tripteroptychus gilchristi	0.58	45	0.09	
Notopogon macrosolen	0.44	6	0.07	
Lampanyctodes hectoris	0.37	156	0.06	
Starfish - many arms	0.32	27	0.05	
Notacanthus sexspinus	0.29	9	0.05	
Starfish red A	0.23	9	0.04	
Parapagurus pilosimanus	0.22	18	0.04	
Beryx splendens	0.17	3	0.03	1177
Photichthys argenteus	0.17	9	0.03	
Champsodon capensis	0.12	9	0.02	
Sepia sp. New SA	0.06	9	0.01	
Lucigadus ori	0.05	18	0.01	
Rochinia sp.	0.05	9	0.01	
Merluccius paradoxus	0.04	9	0.01	1180
Hoplostethus mediterraneus	0.04	9	0.01	
Lycoteuthis lorigera	0.03	9	0.00	
Stereomastis sp.	0.03	9	0.00	
Paraliparis sp.	0.02	9	0.00	
Total	614.88		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	179.35	159	29.42	1188
Nezumia sp.	57.63	1176	9.45	
Coelorinchus braueri	51.51	735	8.45	
Merluccius paradoxus	50.96	69	8.36	1190
Centrophorus squamosus	45.87	14	7.52	
Selachophidium guentheri	27.99	27	4.59	
Notacanthus sexspinus	26.93	414	4.42	
Coelorinchus matama	24.70	123	4.05	
Chaceon maritae	17.64	188	2.89	
Alloctytus verrucosus	16.23	80	2.66	
Anemones, pink	11.06	18	1.81	
Bristle worms (straws)	10.82	1462	1.77	
Starfish - many arms	10.00	1449	1.64	
Moroteuthis robsoni	9.80	2	1.61	
Sergia sp.	7.76	1764	1.27	
Coloconger cadenati	5.60	18	0.92	
Histioteuthis miranda	5.41	4	0.89	
PASIPHAELIDAE	4.70	294	0.77	
Neoscolopelus macrolepidotus	4.23	147	0.69	
Psychrolutes macrocephalus	3.78	41	0.62	
Apristurus saldanha	3.69	2	0.60	
Scopelosaurus meadi	3.36	76	0.55	0
Lophius vomerinus	3.18	2	0.52	1189
Octopoteuthis sicula	2.82	6	0.46	
Hoplostethus cadenati	2.61	129	0.43	
Photichthys argenteus	2.44	106	0.40	
Bathophilus sp.	2.21	35	0.36	
Raja confundens	2.20	8	0.36	
Raja leopardus	1.96	4	0.32	
Xenodermichthys copei	1.62	65	0.27	
Shrimps, small, non comm.	1.55	180	0.25	
Starfish white 5 arms	1.52	304	0.25	
Anemones, coral red	1.48	6	0.24	
Hoplostethus cadenati	1.32	1204	0.22	0
Todarodes angolensis	1.18	2	0.19	1191
Bathyrroconger vicinus	0.84	18	0.14	
Rossia enigmatica	0.82	29	0.14	
Etmopterus brachyurus	0.78	4	0.13	
Opisthoteuthis rossi	0.56	4	0.09	
Gymnoscopelus sp.	0.25	6	0.04	
Lucigadus ori	0.14	18	0.02	
Lampadena sp.	0.12	6	0.02	
Funchalia woodwardi	0.11	6	0.02	
Tripteroptychus gilchristi	0.11	6	0.02	
Scopelosaurus meadi	0.11	6	0.02	
GONOSTOMATIDAE	0.11	6	0.02	
Raja leopardus, juvenile	0.10	6	0.02	
Avocettina acuticeps	0.09	6	0.02	
Plesiopenaeus edwardsianus	0.09	6	0.01	
Careproctus griseldae	0.07	4	0.01	
XXXXXXX	0.07	12	0.01	
Rochinia sp.	0.06	18	0.01	
Lepidion capensis	0.03	6	0.00	
Total	609.58		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 113  
 DATE :17/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°42.36  
 start stop duration Purpose : 3  
 TIME :08:20:27 08:41:26 21.0 (min) Lon E 15°23.92  
 LOG : 2628.71 2629.76 1.1 Region : 6100  
 FDEPTH: 422 445 Gear cond.: 0  
 BDEPTH: 422 445 Validity : 0  
 Towing dir: 0° Wire out : 1050 m Speed : 3.0 km  
 Sorted : 308 Total catch: 318.23 Catch/hour: 910.11

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 115  
 DATE :17/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°52.57  
 start stop duration Purpose : 3  
 TIME :12:43:01 13:13:28 30.5 (min) Lon E 15°29.32  
 LOG : 2649.39 2650.98 1.6 Region : 6100  
 FDEPTH: 546 553 Gear cond.: 0  
 BDEPTH: 546 553 Validity : 0  
 Towing dir: 0° Wire out : 1250 m Speed : 3.1 km  
 Sorted : 192 Total catch: 260.57 Catch/hour: 513.44

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	358.91	420	39.44	1186
Merluccius paradoxus	198.47	275	21.81	1187
Genypterus capensis	89.23	57	9.80	1181
Coelorinchus simorhynchus	55.20	726	6.06	
Notacanthus sexspinus	50.62	632	5.56	
Bassanago albescens	30.60	57	3.36	
Starfish - many arms	24.68	3629	2.71	
Squalus mitsukurii	17.16	11	1.89	
Lophius vomerinus	14.87	6	1.63	1183
Helicolenus dactylopterus	11.44	37	1.26	1182
Moroteuthis robsoni	10.75	3	1.18	
Starfish white 5 arms	6.58	1879	0.72	
Raja wallacei	5.26	3	0.58	
Raja confundens	4.63	6	0.51	
Todarodes angolensis	4.23	9	0.47	1184
Anemones, white	3.93	60	0.43	
Chimera sp.	3.78	3	0.41	
Etmopterus brachyurus	2.79	80	0.31	
Todarodes angolensis	2.40	3	0.26	1185
Malacocephalus laevis	2.00	11	0.22	
Rossia enigmatica	1.85	86	0.20	
Lucigadus ori	1.81	200	0.20	
Dead coral	1.61	0	0.18	
Tripteroptychus gilchristi	1.10	92	0.12	
Epigonus telescopus	0.76	80	0.08	
Physiculus capensis	0.72	60	0.08	
Whelks	0.69	20	0.08	
Photichthys argenteus	0.62	40	0.07	
Mursia cristimanus	0.51	66	0.06	
Giant bullia gastropod	0.47	7	0.05	
Heart urchin	0.36	40	0.04	
Paracallionymus costatus	0.29	13	0.03	
Aphrodite pol	0.25	146	0.03	
Parapagurus pilosimanus	0.25	13	0.03	
Hoplostethus mediterraneus	0.23	3	0.03	
Bathophilus sp.	0.23	7	0.03	
Mollusc eggs	0.19	13	0.02	
Rochinia sp.	0.17	54	0.02	
Euphausiacea	0.15	212	0.02	
Lycoteuthis lorigera	0.09	7	0.01	
PASIPHAELIDAE	0.07	26	0.01	
Stereomastis sp.	0.05	27	0.01	
Coelorinchus braueri	0.05	7	0.01	
Gymnoscopelus sp.	0.04	7	0.00	
S H R I M P S	0.03	7	0.00	
Total	910.11		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	197.04	165	38.38	1196
Merluccius paradoxus	67.00	93	13.05	1197
Starfish - many arms	32.39	6479	6.76	
Centrophorus squamosus	29.56	4	5.31	
Etmopterus brachyurus	18.92	309	3.68	0
Bristle worms (straws)	17.97	3046	3.50	
Plesionika martia	17.34	2796	3.38	
Chaceon maritae	13.40	158	2.61	
Selachophidium guentheri	12.30	173	2.39	
Deania calcea	10.84	16	2.11	
Raja confundens	9.85	20	1.92	
Notacanthus sexspinus	9.14	223	1.78	
Nezumia sp.	7.88	229	1.54	
Alloctytus verrucosus	7.88	150	1.54	
Raja leopardus	7.88	12	1.54	
Funchalia woodwardi	6.23	499	1.21	
Neoscolopelus macrolepidotus	5.40	229	1.05	
Anemones, coral red	5.30	16	1.03	
Pasiphaea sp.	4.68	1300	0.91	
Lophius vomerinus	4.53	4	0.88	1192
Coelorinchus braueri	3.78	270	0.74	
Bathophilus sp.	2.88	47	0.56	
Photichthys argenteus	2.24	71	0.44	
Todarodes angolensis	1.97	4	0.38	1195
Helicolenus dactylopterus	1.97	6	0.38	1193
Histioteuthis macrohista	1.97	63	0.38	
Hoplostethus cadenati	1.95	95	0.38	
Myxine capensis	1.84	39	0.36	
Starfish white 5 arms	1.25	142	0.24	
Rossia enigmatica	1.21	63	0.24	
Coelorinchus matama	1.01	16	0.20	
Holohalaelurus regani	0.99	2	0.19	
Todarodes angolensis	0.99	2	0.19	1194
Lucigadus ori	0.88	126	0.17	
Coloconger cadenati	0.64	8	0.12	
Etmopterus brachyurus	0.59	2	0.12	
Epigonus telescopus	0.35	8	0.07	
Bathypolypus valdiviae	0.34	8	0.07	
Sergia sp.	0.32	63	0.06	
Xenodermichthys copei	0.23	24	0.04	
Tripteroptychus gilchristi	0.19	8	0.04	
Raja confundens, juvenile	0.13	16	0.03	
Gymnoscopelus sp.	0.07	16	0.01	
Plesiopenaeus edwardsianus	0.06	8	0.01	
Raja sp., juvenile	0.04	8	0.01	
Diaphus sp.	0.02	8	0.00	
Total	513.44		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 116  
 DATE :17/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°52.40  
 start stop duration Purpose : 3 Lon E 15°32.18  
 TIME :14:57:32 15:27:48 30.3 (min)  
 LOG : 2655.66 2657.23 1.6  
 FDEPTH: 453 445 Gear cond.: 0  
 BDEPTH: 453 445 Validity : 0  
 Towing dir: 0° Wire out : 1150 m Speed : 3.1 km  
 Sorted : 807 Total catch: 1393.51 Catch/hour: 2762.16

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Notacanthus sexspinis	937.56	15891	33.94	
Merluccius paradoxus	507.43	680	18.37	1203
Merluccius paradoxus	436.08	627	15.79	1198
Merluccius paradoxus	319.13	498	11.55	1204
Starfish - many arms	233.30	48605	8.45	
Gemypterus capensis	110.01	52	3.98	1199
Raja confundens	77.11	85	2.79	
Raja leopardus	55.90	40	2.02	
Lophius vomerinus	26.56	8	0.96	1201
Chaceon maritae	6.74	65	0.24	
Rossia enigmatica	6.08	392	0.22	
Etmopterus brachyurus	5.32	218	0.19	
Helicolenus dactylopterus	5.15	14	0.19	1200
Anemones, white	3.90	22	0.14	
Coelorinchus simorhynchus	3.10	87	0.11	
Todarodes angolensis	2.81	6	0.10	1202
Selachophidium guentheri	2.70	22	0.10	
Hydrolagus africanus	2.38	2	0.09	
Physiculus capensis	2.14	109	0.08	
Photichthys argenteus	2.14	174	0.08	
Chimera sp.	1.98	2	0.07	
Myxine capensis	1.94	22	0.07	
Starfish white 5 arms	1.68	153	0.06	
Tripterocephalus gilchristi	1.64	65	0.06	
Hoplostethus mediterraneus	1.53	22	0.06	
Paracallionymus costatus	1.53	44	0.06	
Bathymetecus piperitus	0.92	22	0.03	
Holohalaelurus regani	0.79	2	0.03	
Bathophilus sp.	0.65	22	0.02	
Octopus magnificus	0.61	2	0.02	
Lycoteuthis lorigera	0.57	44	0.02	
Raja sp., juvenile	0.41	87	0.01	
Chauliodus sloani	0.39	22	0.01	
Epigonus telescopus	0.35	44	0.01	
Parapagurus pilosimanus	0.33	44	0.01	
Howella shernborni	0.31	22	0.01	
Gastropod nei	0.28	44	0.01	
Lucigadus ori	0.22	22	0.01	
Starfish red A	0.22	22	0.01	
Mursia cristimanus	0.22	22	0.01	
Chlorophthalmus sp.	0.07	22	0.00	
Total	2762.16		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 117  
 DATE :18/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°7.00  
 start stop duration Purpose : 1 Lon E 16°1.48  
 TIME :04:49:57 05:20:37 30.7 (min)  
 LOG : 2739.12 2740.68 1.6  
 FDEPTH: 199 199 Gear cond.: 0  
 BDEPTH: 199 199 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 3.1 km  
 Sorted : 158 Total catch: 436.57 Catch/hour: 854.07

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	307.73	7923	36.03	1214
Etrumeus whiteheadi	149.56	2048	17.51	
Starfish - many arms	57.03	14258	6.68	
Thyrssites atun	46.95	29	5.50	1211
Sepia australis	36.58	3326	4.28	
Spatangus capensis	35.08	274	4.11	
Chelidonichthys capensis	32.87	57	3.85	1205
Merluccius paradoxus	24.85	3780	2.91	1218
Merluccius capensis	18.98	20	2.22	1212
Merluccius capensis	18.00	20	2.11	1213
Lophius vomerinus	17.80	27	2.08	1208
Anemones, coral red	16.57	436	1.94	
Chelidonichthys queketti	15.06	113	1.76	1207
Paracallionymus costatus	13.45	3539	1.57	
Helicolenus dactylopterus	12.72	266	1.49	1206
Holohalaelurus regani	11.74	61	1.37	
Cynoglossus zanzibarensis	7.42	129	0.87	1216
Coelorinchus simorhynchus	4.41	54	0.52	
Todaropsis eblanae	4.20	75	0.49	1217
Merluccius paradoxus	2.93	6	0.34	1210
Starfish - giant	2.82	2	0.33	
Gemypterus capensis	2.54	10	0.30	1209
J E L L Y F I S H	2.15	11	0.25	
Raja straeleni	1.57	4	0.18	
Lepidopus caudatus	1.41	2	0.16	
Todarodes angolensis	1.29	2	0.15	1215
Emmelichthys nitidus	1.29	2	0.15	
Congiopus spinifer	1.17	6	0.14	
Helicolenus dactylopterus	1.08	183	0.13	1219
Heart urchin	1.03	54	0.12	
Whelks	0.79	11	0.09	
Emmelichthys nitidus	0.70	54	0.08	0
URCHINS	0.65	11	0.08	
Pterygosquilla armata capensis	0.58	97	0.07	
Starfish white 5 arms	0.33	31	0.04	
Sepia hieronis	0.32	22	0.04	
Gastropod nei	0.17	11	0.02	
Lolligoncula mercatoris	0.15	43	0.02	
Mursia cristimanus	0.10	11	0.01	
Total	854.07		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 118  
 DATE :18/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°11.26  
 start stop duration Purpose : 1 Lon E 16°0.86  
 TIME :06:51:56 07:06:57 15.0 (min)  
 LOG : 2749.07 2749.82 0.8  
 FDEPTH: 206 206 Gear cond.: 0  
 BDEPTH: 206 206 Validity : 0  
 Towing dir: 0° Wire out : 515 m Speed : 3.0 km  
 Sorted : 112 Total catch: 308.15 Catch/hour: 1230.97

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	830.89	14696	67.50	1225
Etrumeus whiteheadi	97.79	1378	7.94	
Chelidonichthys capensis	57.92	108	4.71	1228
Spatangus capensis	45.22	431	3.67	
Helicolenus dactylopterus	37.55	487	3.05	1233
J E L L Y F I S H	31.96	112	2.60	
Merluccius capensis	18.54	12	1.51	1226
Holohalaelurus regani	17.18	72	1.40	
Lophius vomerinus	16.62	20	1.35	1223
Sponges - spiky	12.54	4	1.02	
Coelorinchus simorhynchus	11.03	128	0.90	
Starfish - many arms	9.43	2357	0.77	
Thyrssites atun	5.91	4	0.48	1224
Emmelichthys nitidus	5.23	48	0.42	0
Cynoglossus zanzibarensis	5.03	80	0.41	1221

Chelidonichthys queketti	3.36	24	0.27	1222
Congiopus spinifer	3.28	24	0.27	
Gemypterus capensis	2.80	12	0.23	1220
Merluccius paradoxus	2.16	4	0.18	1227
Sepia australis	2.05	208	0.17	
Zeus capensis	1.97	48	0.16	1229
Heart urchin	1.92	96	0.16	
Todaropsis eblanae	1.84	32	0.15	1230
Emmelichthys nitidus	1.84	4	0.15	
Congiopus torvus	1.60	4	0.13	
Paracallionymus costatus	1.21	256	0.10	
Anemones, coral red	1.09	48	0.09	
Merluccius paradoxus	0.67	96	0.05	1232
Sepia hieronis	0.54	16	0.04	
Helicolenus dactylopterus	0.53	64	0.04	1231
Parapagurus dimorphus	0.32	32	0.03	
Pterygosquilla armata capensis	0.29	48	0.02	
Starfish red A	0.29	16	0.02	
Starfish white 5 arms	0.19	16	0.02	
Nudibranchs	0.14	16	0.01	
Sepia sp. New SA	0.08	16	0.01	
Total	1230.97		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 119  
 DATE :18/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°18.95  
 start stop duration Purpose : 3 Lon E 15°57.98  
 TIME :08:35:51 09:06:31 30.7 (min)  
 LOG : 2759.35 2760.98 1.6  
 FDEPTH: 227 230 Gear cond.: 0  
 BDEPTH: 227 230 Validity : 0  
 Towing dir: 0° Wire out : 575 m Speed : 3.2 km  
 Sorted : 139 Total catch: 355.25 Catch/hour: 694.98

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	418.16	6745	60.17	1242
PORIFERA (Sponges)	44.02	1467	6.33	
Spatangus capensis	31.16	0	4.48	
Helicolenus dactylopterus	24.85	319	3.57	1236
Lophius vomerinus	23.48	12	3.38	1234
Holohalaelurus regani	21.91	70	3.15	
Merluccius capensis	16.63	16	2.39	1243
Thyrssites atun	16.43	10	2.36	1237
Anemones, coral red	14.61	859	2.10	
Coelorinchus simorhynchus	12.68	168	1.82	
Chelidonichthys capensis	10.17	16	1.46	1235
Callorhinchus capensis	7.63	2	1.10	
Todaropsis eblanae	7.31	79	1.05	1246
Raja straeleni	5.24	2	0.75	
Raja wallacei	4.26	2	0.61	
Cynoglossus zanzibarensis	3.96	62	0.57	1245
Squalus mitsukurii	3.76	0	0.54	
Brama brama	3.01	4	0.43	1238
Merluccius capensis	2.93	4	0.42	1244
Sea pens	2.90	16	0.42	
Zeus capensis	2.45	35	0.35	1248
Congiopus spinifer	1.96	12	0.28	
Gemypterus capensis	1.96	6	0.28	1239
J E L L Y F I S H	1.55	9	0.22	
XXXXXXX	1.17	2	0.17	
Todarodes angolensis	1.13	2	0.16	1241
Chelidonichthys queketti	1.10	6	0.16	1240
Exodromidia sp.	1.02	18	0.15	
Rossia enigmatica	0.83	70	0.12	
Starfish red B	0.70	35	0.10	
Paracallionymus costatus	0.68	176	0.10	
Helicolenus dactylopterus	0.68	114	0.10	1247
Heart urchin	0.58	18	0.08	
Giant bullia gastropod	0.55	4	0.08	
Starfish - red D	0.47	2	0.07	
Notopogon macrolepis	0.47	9	0.07	
Starfish - fleshy A	0.40	18	0.06	
Sepia hieronis	0.38	9	0.05	
Whelks	0.35	9	0.05	
Sepia australis	0.21	18	0.03	
Pterygosquilla armata capensis	0.19	35	0.03	
Physiculus capensis	0.18	9	0.03	
Sepia typica	0.15	26	0.02	
Mauroliticus muelleri	0.14	98	0.02	
Starfish - spiky	0.12	9	0.02	
Macropipus australis	0.12	9	0.02	
Sea cucumber	0.07	18	0.01	
Starfish red A	0.07	9	0.01	
Lophius vomerinus	0.06	9	0.01	1249
Lolligoncula mercatoris	0.05	18	0.01	
Sepia sp. New SA	0.04	9	0.01	
Coral - Alcyonacae_SA	0.04	9	0.01	
Ophiuroidea	0.03	9	0.00	
Total	694.98		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 120  
 DATE :18/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°15.51  
 start stop duration Purpose : 3 Lon E 16°5.83  
 TIME :10:19:16 10:49:40 30.4 (min)  
 LOG : 2769.75 2771.23 1.5  
 FDEPTH: 216 214 Gear cond.: 0  
 BDEPTH: 216 214 Validity : 0  
 Towing dir: 0° Wire out : 510 m Speed : 2.9 km  
 Sorted : 97 Total catch: 355.35 Catch/hour: 701.35

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	552.63	8777	78.80	1253
Spatangus capensis	55.86	620	7.96	
Holohalaelurus regani	13.42	63	1.91	
Merluccius capensis	13.14	14	1.87	1256
Helicolenus dactylopterus	12.04	227	1.72	1257
Thyrssites atun	10.26	6	1.46	1250
Callorhinchus capensis	5.92	2	0.84	
Lophius vomerinus	5.45	8	0.78	1260
Merluccius capensis	5.01	6	0.71	1255
Coelorinchus simorhynchus	4.39	79	0.63	
Chelidonichthys capensis	3.79	10	0.54	1252
Raja straeleni	3.71	4	0.53	
Paracallionymus costatus	2.40	343	0.34	
Todaropsis eblanae	1.89	20	0.27	1323
Cynoglossus zanzibarensis	1.68	30	0.24	1258
Emmelichthys nitidus	1.42	39	0.20	
Chelidonichthys queketti	1.34	10	0.19	1251
Gemypterus capensis	1.14	8	0.16	1254
Starfish red B	0.98	39	0.14	
Anemones, coral red	0.91	49	0.13	
Congiopus spinifer	0.71	6	0.10	
Heart urchin	0.71	20	0.10	
J E L L Y F I S H	0.62	10	0.09	
Merluccius paradoxus	0.59	59	0.08	1259
Sea pens	0.55	4	0.08	
Sepia australis	0.39	49	0.06	
Pterygosquilla armata capensis	0.14	20	0.02	
Lolligoncula mercatoris	0.12	39	0.02	
Lophius vomerinus	0.08	10	0.01	1324
Sepia sp. New SA	0.04	10	0.01	
Total	701.35		100.00	

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 121		6 POSITION:Lat S 30°8.99		Lon E 16°20.89	
DATE	start	stop	duration	Purpose	Region	Gear cond.	Validity	Speed	Catch/hour
:18/02/2012	12:57:19	13:27:22	30.0 (min)	3	6100	0	0	3.0 km	462.00
LOG	: 2787.32	2788.84	1.5						
FDEPTH:	190	189							
BDEPTH:	190	189							
Towing dir:	0°	Wire out	: 475 m						
Sorted	: 129	Total catch:	231.31						
SPECIES									
	weight	numbers	CATCH/HOUR	% OF TOT. C	SAMP		weight	numbers	CATCH/HOUR
Merluccius paradoxus	214.71	3967	46.47	1270		Merluccius paradoxus	0.46	56	0.20
Lophius vomerinus	40.95	72	8.86	1269		Gastropod nei	0.36	13	0.15
Etrumeus whiteheadi	39.95	713	8.65			Holohalaelurus regani	0.29	13	0.12
Helicolenus dactylopterus	38.95	1075	8.43	1261		Nudibranchs	0.28	13	0.12
J E L Y F I S H	26.66	0	5.77			Cone gastropod	0.25	13	0.11
Sepia australis	18.13	929	3.92			Genypterus capensis	0.18	13	0.07
Merluccius capensis	14.18	20	3.07	1267		Lepidopus caudatus	0.14	6	0.06
Spatangus capensis	11.78	75	2.55			Todaropsis eblanae	0.10	6	0.04
Paracallionymus costatus	11.09	955	2.40			Sepia australis	0.04	13	0.02
Merluccius capensis	10.39	8	2.25	1268					
Genypterus capensis	7.19	38	1.56	1262		Total	235.59		100.00
Thyrsites atun	5.43	4	1.18	1265					
Coelorrinchus simorhynchus	4.19	70	0.91						
Todaropsis eblanae	3.30	55	0.71	1273					
Anemones, coral red	2.90	45	0.63						
Cynoglossus zanzibarensis	1.85	45	0.40	1271					
Brama brama	1.60	2	0.35	1266					
Heart urchin	1.48	60	0.32						
Merluccius paradoxus	1.40	215	0.30	1272					
Holohalaelurus regani	1.24	10	0.27						
Chelidonichthys queketti	0.92	6	0.20	1264					
Whelks	0.91	15	0.20						
URCHINS	0.74	5	0.16						
Helicolenus dactylopterus	0.45	40	0.10	1274					
Chelidonichthys capensis	0.44	2	0.10	1263					
Sepia hieronis	0.25	10	0.05						
Nudibranchs	0.20	5	0.04						
Pterygosquilla armata capensis	0.12	15	0.03						
Zeus capensis	0.11	10	0.02	1275					
Lampanyctodes hectoris	0.11	20	0.02						
Starfish red B	0.10	5	0.02						
Sepia sp. New SA	0.08	15	0.02						
Amalda bullioides	0.06	15	0.01						
Lolligoncula mercatoris	0.05	15	0.01						
Congiopus spinifer	0.05	5	0.01						
Lophius vomerinus	0.04	5	0.01	1276					
Rossia enigmatica	0.03	5	0.01						
Maurollicus muelleri	0.02	10	0.00						
Total	462.00			100.00					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 124		6 POSITION:Lat S 29°36.39		Lon E 16°36.10	
DATE	start	stop	duration	Purpose	Region	Gear cond.	Validity	Speed	Catch/hour
:19/02/2012	04:50:02	05:21:01	31.0 (min)	3	6100	0	0	3.0 km	163.20
LOG	: 2911.62	2913.16	1.6						
FDEPTH:	149	148							
BDEPTH:	149	148							
Towing dir:	0°	Wire out	: 450 m						
Sorted	: 70	Total catch:	163.20						
SPECIES									
	weight	numbers	CATCH/HOUR	% OF TOT. C	SAMP		weight	numbers	CATCH/HOUR
J E L Y F I S H	123.47	0	39.06			J E L Y F I S H	123.47	0	39.06
Merluccius capensis	72.63	610	22.98	1303		Merluccius capensis	72.63	610	22.98
Pterygosquilla armata capensis	46.00	3833	14.55			Pterygosquilla armata capensis	46.00	3833	14.55
Lampanyctodes hectoris	10.59	3114	3.35			Lampanyctodes hectoris	10.59	3114	3.35
Todaropsis eblanae	7.65	203	2.42	1304		Todaropsis eblanae	7.65	203	2.42
Merluccius paradoxus	7.17	160	2.27	1305		Merluccius paradoxus	7.17	160	2.27
Sufflogobius bibarbatatus	6.97	1292	2.21			Sufflogobius bibarbatatus	6.97	1292	2.21
Chelidonichthys capensis	5.15	21	1.63	1300		Chelidonichthys capensis	5.15	21	1.63
Sponges - yellow	4.45	0	1.41			Sponges - yellow	4.45	0	1.41
Callorhynchus capensis	3.52	2	1.12			Callorhynchus capensis	3.52	2	1.12
Solenocera sp.	3.39	292	1.07			Solenocera sp.	3.39	292	1.07
Nudibranchs	3.31	285	1.05			Nudibranchs	3.31	285	1.05
Macropipus australis	3.05	136	0.97			Macropipus australis	3.05	136	0.97
Exodromidia sp.	2.69	341	0.85			Exodromidia sp.	2.69	341	0.85
Sepia australis	2.66	58	0.84			Sepia australis	2.66	58	0.84
Genypterus capensis	2.42	48	0.77	1310		Genypterus capensis	2.42	48	0.77
Whelks	1.66	29	0.53			Whelks	1.66	29	0.53
Heart urchin	1.65	110	0.52			Heart urchin	1.65	110	0.52
Sepia hieronis	1.31	39	0.41			Sepia hieronis	1.31	39	0.41
Lepidopus caudatus	1.16	83	0.37			Lepidopus caudatus	1.16	83	0.37
Genypterus capensis	0.97	19	0.31	1299		Genypterus capensis	0.97	19	0.31
Euphausiacea	0.74	1484	0.23			Euphausiacea	0.74	1484	0.23
Starfish red A	0.56	64	0.18			Starfish red A	0.56	64	0.18
Coral - small	0.51	364	0.16			Coral - small	0.51	364	0.16
Gastropod nei	0.41	34	0.13			Gastropod nei	0.41	34	0.13
Helicolenus dactylopterus	0.31	2	0.10	1302		Helicolenus dactylopterus	0.31	2	0.10
Janus lalandii	0.27	2	0.09	1301		Janus lalandii	0.27	2	0.09
Cynoglossus zanzibarensis	0.27	24	0.08	1308		Cynoglossus zanzibarensis	0.27	24	0.08
Maurollicus muelleri	0.26	172	0.08			Maurollicus muelleri	0.26	172	0.08
Helicolenus dactylopterus	0.17	10	0.05	1307		Helicolenus dactylopterus	0.17	10	0.05
Paracallionymus costatus	0.16	39	0.05			Paracallionymus costatus	0.16	39	0.05
Cone gastropod	0.13	5	0.04			Cone gastropod	0.13	5	0.04
Merluccius paradoxus	0.12	15	0.04	1306		Merluccius paradoxus	0.12	15	0.04
Lolligoncula mercatoris	0.09	48	0.03			Lolligoncula mercatoris	0.09	48	0.03
Goneplax angulata	0.09	10	0.03			Goneplax angulata	0.09	10	0.03
Merluccius capensis	0.07	10	0.02	1309		Merluccius capensis	0.07	10	0.02
Congiopus spinifer	0.05	10	0.02			Congiopus spinifer	0.05	10	0.02
Iniotenthis capensis	0.01	5	0.00			Iniotenthis capensis	0.01	5	0.00
Total	316.07			100.00		Total	316.07		100.00

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 125		6 POSITION:Lat S 29°43.19		Lon E 16°21.97	
DATE	start	stop	duration	Purpose	Region	Gear cond.	Validity	Speed	Catch/hour
:19/02/2012	07:31:00	08:01:24	30.4 (min)	3	6100	0	0	3.0 km	862.26
LOG	: 2928.93	2930.48	1.6						
FDEPTH:	168	167							
BDEPTH:	168	167							
Towing dir:	0°	Wire out	: 450 m						
Sorted	: 120	Total catch:	862.26						
SPECIES									
	weight	numbers	CATCH/HOUR	% OF TOT. C	SAMP		weight	numbers	CATCH/HOUR
Sponges - yellow	1171.38	0	68.83			Sponges - yellow	1171.38	0	68.83
Merluccius paradoxus	224.51	5552	13.19	1316		Merluccius paradoxus	224.51	5552	13.19
Merluccius capensis	67.11	225	3.94	1315		Merluccius capensis	67.11	225	3.94
Etrumeus whiteheadi	39.38	728	2.31			Etrumeus whiteheadi	39.38	728	2.31
Yellow sponges	34.54	0	2.03	0		Yellow sponges	34.54	0	2.03
Sepia australis	31.78	1747	1.87			Sepia australis	31.78	1747	1.87
Paracallionymus costatus	20.72	1354	1.22			Paracallionymus costatus	20.72	1354	1.22
Helicolenus dactylopterus	19.00	1285	1.12	1318		Helicolenus dactylopterus	19.00	1285	1.12
Pterygosquilla armata capensis	17.55	1170	1.03			Pterygosquilla armata capensis	17.55	1170	1.03
Lophius vomerinus	13.82	36	0.81	1313		Lophius vomerinus	13.82	36	0.81
Genypterus capensis	12.24	99	0.72	1311		Genypterus capensis	12.24	99	0.72
Chelidonichthys capensis	11.84	32	0.70	1312		Chelidonichthys capensis	11.84	32	0.70
Merluccius capensis	8.29	48	0.49	1317		Merluccius capensis	8.29	48	0.49
Todaropsis eblanae	5.32	159	0.31	1321		Todaropsis eblanae	5.32	159	0.31
Holohalaelurus regani	4.03	62	0.24			Holohalaelurus regani	4.03	62	0.24
J E L Y F I S H	3.45	0	0.20			J E L Y F I S H	3.45	0	0.20
Heart urchin	3.09	69	0.18			Heart urchin	3.09	69	0.18
Cynoglossus zanzibarensis	2.07	41	0.12	1320		Cynoglossus zanzibarensis	2.07	41	0.12
Macropipus australis	2.05	77	0.12			Macropipus australis	2.05	77	0.12
Exodromidia sp.	1.43	174	0.08			Exodromidia sp.	1.43	174	0.08
Gastropod nei	1.21	35	0.07			Gastropod nei	1.21	35	0.07
Genypterus capensis	1.11	62	0.06	1319		Genypterus capensis	1.11	62	0.06
Coelorrinchus simorhynchus	1.06	62	0.06			Coelorrinchus simorhynchus	1.06	62	0.06
Congiopus spinifer	0.72	7	0.04			Congiopus spinifer	0.72	7	0.04
Starfish - fleshy	0.67	7	0.04			Starfish - fleshy	0.67	7	0.04
Whelks	0.66	7	0.04			Whelks	0.66	7	0.04
Merluccius paradoxus	0.62	76	0.04	1322		Merluccius paradoxus	0.62	76	0.04
Sepia hieronis	0.39	14	0.02			Sepia hieronis	0.39	14	0.02
Lamp									

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 126		DATE :19/02/2012		GEAR TYPE: BT NO: 6		POSITION:Lat S 29°47.98		Longitude E 16°9.60		Todarodes angolensis		1.78		2		0.55		1359								
start	stop	duration	Purpose	Region	Gear cond.:	Validity	Speed	Wire out	Catch/hour	start	stop	duration	Purpose	Region	Gear cond.:	Validity	Speed	Wire out	Catch/hour	start	stop	duration	Purpose	Region	Gear cond.:	Validity	Speed	Wire out	Catch/hour	
10:01:25	10:31:52	30.5 (min)	3	6100	0	0	3.0 km	450 m	557.19	19:54:48	20:04:56	10.1 (min)	1	6100	0	0	3.2 km	470 m	4.61	19:02/2012	20:04:56	10.1 (min)	1	6100	0	0	3.2 km	470 m	4.61	
LOG	2943.92	2945.43	1.5							LOG	3004.80	3005.34	0.6							LOG	3005.77	3006.56	0.5							
FDEPTH:	185	186								FDEPTH:	170	170								FDEPTH:	86	76								
BDEPTH:	185	186								BDEPTH:	201	201								BDEPTH:	201	201								
Towing dir:	0°	Wire out	450 m							Towing dir:	0°	Wire out	470 m							Towing dir:	0°	Wire out	220 m							
Sorted	93	Total catch:	282.77							Sorted	5	Total catch:	4.61							Sorted	2	Total catch:	1.82							
SPECIES		CATCH/HOUR		% OF TOT. C		SAMP				SPECIES		CATCH/HOUR		% OF TOT. C		SAMP				SPECIES		CATCH/HOUR		% OF TOT. C		SAMP				
Merluccius paradoxus	204.93	4508	36.78	1330	Merluccius paradoxus	231.16	4766	51.29	1344	Merluccius paradoxus	43.42	486	9.63	1343	Merluccius paradoxus	1.25	4	0.28	1346	Merluccius paradoxus	1.41	20	0.31							
Etrumeus whiteheadi	139.51	2215	25.04		Etrumeus whiteheadi	18.69	125	4.15		Etrumeus whiteheadi	25.13	18	5.57	1342	Etrumeus whiteheadi	0.87	30	0.19		Etrumeus whiteheadi	0.10	7	0.02							
Spatangus capensis	63.05	351	11.32		Spatangus capensis	18.69	125	4.15		Spatangus capensis	21.71	334	4.82		Spatangus capensis	0.84	6	0.19	1345	Spatangus capensis	0.09	3	0.02							
Aequorea forskalea	27.59	0	4.95		Aequorea forskalea	18.09	36	4.01	1341	Aequorea forskalea	18.09	36	4.01	1341	Aequorea forskalea	0.53	36	0.12		Aequorea forskalea	0.07	13	0.02							
Lophius vomerinus	26.60	49	4.77	1326	Lophius vomerinus	13.27	10	2.94	1340	Lophius vomerinus	13.27	10	2.94	1340	Lophius vomerinus	0.60	3	0.13		Lophius vomerinus	0.07	13	0.02							
Sepia australis	16.39	656	2.94		Sepia australis	12.26	8	2.72	1338	Sepia australis	6.83	6	1.52		Sepia australis	0.53	36	0.12		Sepia australis	0.04	26	0.01							
Merluccius capensis	14.78	32	2.65	1329	Merluccius capensis	10.25	1220	2.41		Merluccius capensis	6.43	42	1.43		Merluccius capensis	0.52	2	0.12	1347	Merluccius capensis	0.04	26	0.01							
Heart urchin	13.79	276	2.48		Heart urchin	4.02	94	0.89		Heart urchin	6.03	2	1.34		Heart urchin	0.51	16	0.11		Heart urchin	0.03	3	0.01	1352						
Thyrssites atum	13.79	8	2.48	1325	Thyrssites atum	4.02	101	0.89	1337	Thyrssites atum	4.02	101	0.89	1337	Thyrssites atum	0.51	16	0.11		Thyrssites atum	0.03	3	0.01							
Paracallionymus costatus	12.61	1068	2.26		Paracallionymus costatus	2.95	47	0.65	1349	Paracallionymus costatus	7.04	790	1.56		Paracallionymus costatus	0.36	2	0.08		Paracallionymus costatus	0.03	3	0.01							
Helicolenus dactylopterus	9.85	638	1.77	1331	Helicolenus dactylopterus	2.45	14	0.54	1339	Helicolenus dactylopterus	6.83	6	1.52		Helicolenus dactylopterus	0.36	2	0.08		Helicolenus dactylopterus	0.03	3	0.01							
Todaropsis eblanae	4.10	102	0.74	1336	Todaropsis eblanae	2.45	14	0.54	1339	Todaropsis eblanae	7.04	790	1.56		Todaropsis eblanae	0.36	2	0.08		Todaropsis eblanae	0.03	3	0.01							
Cynoglossus zanzibarensis	2.84	79	0.51	1332	Cynoglossus zanzibarensis	2.28	90	0.51		Cynoglossus zanzibarensis	6.83	6	1.52		Cynoglossus zanzibarensis	0.36	2	0.08		Cynoglossus zanzibarensis	0.03	3	0.01							
Holohalaelurus regani	1.66	24	0.30		Holohalaelurus regani	2.28	90	0.51		Holohalaelurus regani	6.83	6	1.52		Holohalaelurus regani	0.36	2	0.08		Holohalaelurus regani	0.03	3	0.01							
Chelidonichthys capensis	1.18	4	0.21	1327	Chelidonichthys capensis	1.94	235	0.43	1350	Chelidonichthys capensis	6.43	42	1.43		Chelidonichthys capensis	0.36	2	0.08		Chelidonichthys capensis	0.03	3	0.01							
Lophius vomerinus	1.06	32	0.19	1335	Lophius vomerinus	1.94	235	0.43	1350	Lophius vomerinus	6.43	42	1.43		Lophius vomerinus	0.36	2	0.08		Lophius vomerinus	0.03	3	0.01							
Genypterus capensis	0.99	10	0.18	1328	Genypterus capensis	1.88	34	0.42	1348	Genypterus capensis	6.43	42	1.43		Genypterus capensis	0.36	2	0.08		Genypterus capensis	0.03	3	0.01							
Merluccius paradoxus	0.87	95	0.16	1334	Merluccius paradoxus	1.49	2	0.33	1354	Merluccius paradoxus	6.43	42	1.43		Merluccius paradoxus	0.36	2	0.08		Merluccius paradoxus	0.03	3	0.01							
Coelorrhinchus simorhynchus	0.80	39	0.14		Coelorrhinchus simorhynchus	1.41	20	0.31		Coelorrhinchus simorhynchus	6.43	42	1.43		Coelorrhinchus simorhynchus	0.36	2	0.08		Coelorrhinchus simorhynchus	0.03	3	0.01							
Sepia hieronis	0.27	24	0.05		Sepia hieronis	1.41	20	0.31		Sepia hieronis	6.43	42	1.43		Sepia hieronis	0.36	2	0.08		Sepia hieronis	0.03	3	0.01							
Lepidopus caudatus	0.20	8	0.04		Lepidopus caudatus	1.41	20	0.31		Lepidopus caudatus	6.43	42	1.43		Lepidopus caudatus	0.36	2	0.08		Lepidopus caudatus	0.03	3	0.01							
Gastropod nei	0.18	8	0.03		Gastropod nei	1.41	20	0.31		Gastropod nei	6.43	42	1.43		Gastropod nei	0.36	2	0.08		Gastropod nei	0.03	3	0.01							
Starfish red A	0.10	8	0.02		Starfish red A	1.41	20	0.31		Starfish red A	6.43	42	1.43		Starfish red A	0.36	2	0.08		Starfish red A	0.03	3	0.01							
Rossia enigmatica	0.04	16	0.01		Rossia enigmatica	1.41	20	0.31		Rossia enigmatica	6.43	42	1.43		Rossia enigmatica	0.36	2	0.08		Rossia enigmatica	0.03	3	0.01							
Total	557.19		100.00		Total	450.69		100.00		Total	450.69		100.00	Total	450.69		100.00		Total	450.69		100.00								

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 134  
 DATE :19/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.80  
 start stop duration Purpose : 1  
 TIME :23:30:48 23:41:03 10.3 (min) Lon E 16°1.00  
 LOG : 3012.60 3013.11 0.5 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 202 203 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.0 km  
 Sorted : 2 Total catch: 1.77 Catch/hour: 10.38  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	8.78	0	84.60
Maurollicus muelleri	0.85	779	8.23
Merluccius paradoxus	0.24	94	2.31
Sepia australis	0.16	23	1.52
Paracallionymus costatus	0.15	70	1.41
Helicolenus dactylopterus	0.10	82	0.96
Sepia hieronis	0.03	6	0.28
Rossia enigmatica	0.03	6	0.28
Inioteuthis capensis	0.03	18	0.22
Phyllosoma	0.01	23	0.06
Euphausiacea	0.01	0	0.06
Total	10.38		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 140  
 DATE :20/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°6.48  
 start stop duration Purpose : 1  
 TIME :03:38:12 03:48:43 10.5 (min) Lon E 16°0.13  
 LOG : 3022.87 3023.41 0.6 Region : 6100  
 FDEPTH: 202 202 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 3.1 km  
 Sorted : 75 Total catch: 75.32 Catch/hour: 429.58  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Merluccius paradoxus	96.96	1968	22.57
Helicolenus dactylopterus	82.70	827	19.25
Genypterus capensis	50.76	97	11.82
Lophius vomerinus	47.34	17	11.02
Merluccius capensis	42.21	40	9.82
Spatangus capensis	26.81	268	6.24
Anemones, coral red	14.66	365	3.41
J E L L Y F I S H	8.56	0	1.99
Starfish - giant	8.56	0	1.99
Cynoglossus zanzibarensis	8.56	165	1.99
PORIFERA (Sponges)	7.53	0	1.75
Lepidopus caudatus	5.70	6	1.33
Sea pens	3.99	17	0.93
Coelorinchus simorhynchus	3.82	63	0.89
Heart urchin	3.74	171	0.87
Paracallionymus costatus	3.71	713	0.86
Holohalaelurus regani	3.42	11	0.80
Merluccius paradoxus	3.19	11	0.74
Merluccius paradoxus	1.71	200	0.40
Whelks	1.37	29	0.32
Sepia australis	0.74	57	0.17
Todaropsis eblanae	0.60	6	0.14
Todaropsis eblanae, male	0.50	6	0.12
Helicolenus dactylopterus	0.42	40	0.10
Rossia enigmatica	0.42	40	0.10
Solenocera sp.	0.38	51	0.09
Gastropod nei	0.33	11	0.08
Sea urchin	0.31	11	0.07
Sepia hieronis	0.26	11	0.06
Starfish - spiky	0.17	6	0.04
Starfish red B	0.10	6	0.02
Physiculus capensis	0.08	6	0.02
Total	429.58		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 135  
 DATE :19/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°7.21  
 start stop duration Purpose : 1  
 TIME :23:48:00 23:57:48 9.8 (min) Lon E 16°1.80  
 LOG : 3013.41 3013.91 0.5 Region : 6100  
 FDEPTH: 30 30 Gear cond.: 0  
 BDEPTH: 202 203 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.1 km  
 Sorted : 1 Total catch: 0.57 Catch/hour: 3.52  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	2.81	6	79.83
Sepia australis	0.39	61	11.13
Inioteuthis capensis	0.10	61	2.78
Maurollicus muelleri	0.10	0	2.78
Merluccius paradoxus	0.06	92	1.74
Helicolenus dactylopterus	0.06	55	1.57
Paracallionymus costatus	0.01	6	0.17
Total	3.52		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 141  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.76  
 start stop duration Purpose : 1  
 TIME :04:49:30 04:59:15 9.8 (min) Lon E 16°0.20  
 LOG : 3025.85 3026.41 0.6 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 450 m Speed : 3.5 km  
 Sorted : 2 Total catch: 2.25 Catch/hour: 13.85  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	8.86	0	63.97
Maurollicus muelleri	3.75	0	27.10
Merluccius paradoxus	1.23	25	8.88
Inioteuthis capensis	0.01	6	0.04
Total	13.85		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 136  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.95  
 start stop duration Purpose : 1  
 TIME :01:22:46 01:32:58 10.2 (min) Lon E 16°1.24  
 LOG : 3016.62 3017.17 0.6 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 203 203 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.2 km  
 Sorted : 5 Total catch: 4.66 Catch/hour: 27.43  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Merluccius paradoxus	14.41	312	52.54
Aequorea forskalea	11.76	24	42.89
Maurollicus muelleri	0.55	459	2.02
Helicolenus dactylopterus	0.25	24	0.90
Sepia australis	0.19	12	0.71
Paracallionymus costatus	0.16	71	0.58
Sepia hieronis	0.09	18	0.32
Inioteuthis capensis	0.01	6	0.04
C R U S T A C E A N S	0.00	0	0.01
Total	27.43		100.01

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 142  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.31  
 start stop duration Purpose : 1  
 TIME :05:12:51 05:23:30 10.7 (min) Lon E 15°58.86  
 LOG : 3027.09 3027.70 0.6 Region : 6100  
 FDEPTH: 70 70 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 220 m Speed : 3.4 km  
 Sorted : 1 Total catch: 1.02 Catch/hour: 5.75  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
JELLYFISH	5.63	17	97.94
Sepia australis	0.11	11	1.96
Inioteuthis capensis	0.01	6	0.10
Total	5.75		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 137  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.52  
 start stop duration Purpose : 1  
 TIME :01:41:53 01:52:16 10.4 (min) Lon E 16°0.27  
 LOG : 3017.56 3018.11 0.6 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 203 202 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.1 km  
 Sorted : 3 Total catch: 2.56 Catch/hour: 14.79  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	12.89	29	87.18
Sepia australis	0.52	58	3.52
Merluccius paradoxus	0.52	69	3.52
Maurollicus muelleri	0.46	306	3.09
Inioteuthis capensis	0.23	139	1.52
Helicolenus dactylopterus	0.10	98	0.70
Paracallionymus costatus	0.06	29	0.39
Phyllosoma	0.01	23	0.04
Euphausiacea	0.01	0	0.04
ISOPODS	0.00	12	0.00
Total	14.79		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 143  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.99  
 start stop duration Purpose : 1  
 TIME :05:29:41 05:39:54 10.2 (min) Lon E 15°57.88  
 LOG : 3028.00 3028.62 0.6 Region : 6100  
 FDEPTH: 25 25 Gear cond.: 7  
 BDEPTH: 202 203 Validity : 9  
 Towing dir: 0° Wire out : 100 m Speed : 3.6 km  
 Sorted : 0 Total catch: 0.00 Catch/hour: 0.00  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
NET NOT OPEN	0.00	0	0.00
Total	0.00		0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 138  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.15  
 start stop duration Purpose : 1  
 TIME :01:57:56 02:09:38 11.7 (min) Lon E 15°59.48  
 LOG : 3018.35 3018.96 0.6 Region : 6100  
 FDEPTH: 30 0 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.1 km  
 Sorted : 2 Total catch: 2.42 Catch/hour: 12.39  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Maurollicus muelleri	4.62	9744	37.24
Aequorea forskalea	2.56	10	20.69
Euphausiacea	1.79	13590	14.48
Merluccius paradoxus	1.49	333	12.04
Sepia australis	1.42	159	11.46
Inioteuthis capensis	0.41	256	3.31
Lolligoncula mercatoris	0.06	21	0.46
SALPS	0.04	5	0.33
Total	12.39		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 144  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.76  
 start stop duration Purpose : 1  
 TIME :07:24:44 07:35:30 10.8 (min) Lon E 16°0.94  
 LOG : 3035.66 3036.25 0.6 Region : 6100  
 FDEPTH: 169 169 Gear cond.: 0  
 BDEPTH: 200 200 Validity : 0  
 Towing dir: 0° Wire out : 460 m Speed : 3.3 km  
 Sorted : 15 Total catch: 15.22 Catch/hour: 84.79  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Maurollicus muelleri	75.60	256061	89.16
J E L L Y F I S H	9.19	0	10.84
Total	84.79		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 139  
 DATE :20/02/2012 GEAR TYPE: PT NO: 7 POSITION:Lat S 30°5.88  
 start stop duration Purpose : 1  
 TIME :02:44:03 02:54:26 10.4 (min) Lon E 15°58.38  
 LOG : 3020.47 3020.98 0.5 Region : 6100  
 FDEPTH: 5 5 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 80 m Speed : 3.0 km  
 Sorted : 0 Total catch: 0.00 Catch/hour: 0.00  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
N O C A T C H	0.00	0	0.00
Total	0.00		0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 145  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.28  
 start stop duration Lon E 15°59.92  
 TIME :07:44:50 07:54:51 10.0 (min) Purpose : 1  
 LOG : 3036.67 3037.22 0.6 Region : 6100  
 FDEPTH: 85 70 Gear cond.: 7  
 BDEPTH: 201 200 Validity : 9  
 Towing dir: 0° Wire out : 220 m Speed : 3.3 km  
 Sorted : 1 Total catch: 0.50 Catch/hour: 3.01

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	2.81	0	93.44	
Maurollicus muelleri	0.13	0	4.17	
Sepia australis	0.07	6	2.39	
PROBLEMS RELEASING NET	0.00	0	0.00	
Total	3.01		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 146  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.89  
 start stop duration Lon E 15°58.84  
 TIME :08:04:24 08:14:19 9.9 (min) Purpose : 1  
 LOG : 3037.68 3038.23 0.6 Region : 6100  
 FDEPTH: 30 30 Gear cond.: 7  
 BDEPTH: 201 201 Validity : 9  
 Towing dir: 0° Wire out : 100 m Speed : 3.3 km  
 Sorted : 2 Total catch: 1.69 Catch/hour: 10.22

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	10.22	60	100.00	
PROBLEMS RELEASING NET	0.00	0	0.00	
Total	10.22		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 147  
 DATE :20/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°6.13  
 start stop duration Lon E 15°59.63  
 TIME :08:55:16 09:25:34 30.3 (min) Purpose : 1  
 LOG : 3040.55 3042.10 1.6 Region : 6100  
 FDEPTH: 201 201 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 3.1 km  
 Sorted : 144 Total catch: 412.49 Catch/hour: 817.07

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	326.84	4300	40.00	
Merluccius paradoxus	227.80	5093	27.88	1398
Merluccius capensis	51.11	57	6.25	1397
Chelidonichthys capensis	30.11	55	3.68	1394
Merluccius capensis	23.57	28	2.88	1396
Spatangus capensis	20.80	291	2.55	
Helicolenus dactylopterus	18.32	267	2.24	1399
Lophius vomerinus	17.43	18	2.13	1393
Anemones, coral red	14.26	366	1.75	
Holohalaelurus regani	11.79	40	1.44	
Brama brama	8.60	6	1.05	1392
Todaropsis eblanae	6.14	89	0.75	1403
Aequorea forskalea	5.94	0	0.73	
Coelorinchus simorhynchus	5.35	59	0.65	
Cynoglossus zanzibarensis	4.95	79	0.61	1402
Sepia australis	4.85	269	0.59	
Paracallionymus costatus	4.85	485	0.59	
Chelidonichthys queketti	4.36	36	0.53	1395
Emmelichthys nitidus	3.96	10	0.48	
Merluccius paradoxus	3.96	495	0.48	1401
Squalus mitsukurii	3.96	2	0.48	
Sea pens	3.37	12	0.41	
Genypterus capensis	2.93	14	0.36	1391
Starfish - giant	1.94	2	0.24	
Gorgorians (coral) red/pink	1.78	0	0.22	
Merluccius capensis	1.58	10	0.19	1400
Congiopodus spinifer	1.47	12	0.18	
Lepidopus caudatus	1.43	2	0.17	
Gastropod nei	0.91	40	0.11	
Starfish red B	0.79	79	0.10	
Giant bullia gastropod	0.74	10	0.09	
Heart urchin	0.55	20	0.07	
Rossia enigmatica	0.19	20	0.02	
Starfish - many arms	0.16	10	0.02	
Emmelichthys nitidus	0.15	10	0.02	0
Solenocera sp.	0.09	10	0.01	
Lolligoncula mercatoris	0.03	10	0.00	
Total	817.07		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 148  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.58  
 start stop duration Lon E 16°0.67  
 TIME :10:32:49 10:43:03 10.2 (min) Purpose : 1  
 LOG : 3044.67 3045.18 0.5 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 201 202 Validity : 0  
 Towing dir: 0° Wire out : 400 m Speed : 3.0 km  
 Sorted : 3 Total catch: 2.52 Catch/hour: 14.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	13.90	0	93.90	
Maurollicus muelleri	0.90	0	6.10	
CENTROLOPHIDAE, juvenile	0.00	0	0.00	
Euphausiacea	0.00	0	0.00	
Total	14.80		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 149  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.07  
 start stop duration Lon E 15°59.62  
 TIME :10:54:23 11:04:44 10.4 (min) Purpose : 1  
 LOG : 3045.68 3046.19 0.5 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 190 m Speed : 3.0 km  
 Sorted : 1 Total catch: 1.00 Catch/hour: 5.80

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	5.80	0	100.00	
Maurollicus muelleri	0.00	0	0.00	
Total	5.80		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 150  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.67  
 start stop duration Lon E 16°0.92  
 TIME :13:17:49 13:27:37 9.8 (min) Purpose : 1  
 LOG : 3052.18 3052.72 0.5 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 470 m Speed : 3.3 km

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	5.80	0	100.00	
Maurollicus muelleri	0.00	0	0.00	
Total	5.80		100.00	

Sorted : 2 Total catch: 2.28 Catch/hour: 13.96

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	12.73	0	91.23	
Maurollicus muelleri	1.22	0	8.77	
Total	13.96		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 151  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.06  
 start stop duration Lon E 16°0.01  
 TIME :13:38:32 13:44:36 6.1 (min) Purpose : 1  
 LOG : 3053.19 3053.53 0.3 Region : 6100  
 FDEPTH: 80 78 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 220 m Speed : 3.4 km  
 Sorted : 0 Total catch: 0.00 Catch/hour: 0.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Total	0.00		0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 152  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.68  
 start stop duration Lon E 15°59.35  
 TIME :13:52:00 14:02:06 10.1 (min) Purpose : 1  
 LOG : 3053.89 3054.47 0.6 Region : 6100  
 FDEPTH: 30 28 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 100 m Speed : 3.5 km  
 Sorted : 5 Total catch: 4.56 Catch/hour: 27.09

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	27.09	0	100.00	
Total	27.09		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 153  
 DATE :20/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°5.35  
 start stop duration Lon E 15°59.35  
 TIME :14:42:42 14:52:44 10.0 (min) Purpose : 1  
 LOG : 3056.69 3057.17 0.5 Region : 6100  
 FDEPTH: 200 200 Gear cond.: 0  
 BDEPTH: 200 200 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 2.9 km  
 Sorted : 90 Total catch: 121.03 Catch/hour: 724.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Etrumeus whiteheadi	225.40	3176	31.13	
Merluccius paradoxus	171.92	4056	23.75	1419
Spatangus capensis	73.94	1101	10.21	
Merluccius capensis	32.78	42	4.53	1412
Merluccius capensis	31.82	30	4.40	1413
Lophius vomerinus	25.84	30	3.57	1410
Chelidonichthys capensis	22.25	42	3.07	1407
Helicolenus dactylopterus	19.02	287	2.63	1408
Sepia australis	14.09	1412	1.95	
Holohalaelurus regani	11.84	0	1.64	
Anemones, coral red	11.67	299	1.61	
Paracallionymus costatus	11.40	1143	1.57	
Gorgorians (coral) red/pink	8.85	60	1.22	
PORIPERA (Sponges)	8.26	0	1.14	
JELLYFISH	7.00	0	0.97	
Chelidonichthys queketti	6.70	42	0.93	1411
Todaropsis eblanae	6.55	81	0.90	1418
Genypterus capensis	5.14	12	0.71	1409
Cynoglossus zanzibarensis	4.58	54	0.63	1417
Merluccius paradoxus	4.04	550	0.56	1416
Squalus megalops	3.95	6	0.55	
Congiopodus spinifer	3.35	6	0.46	
Whelks	2.22	36	0.31	
Holohalaelurus regani	1.54	9	0.21	0
Starfish	1.26	9	0.17	
Helicolenus dactylopterus	1.17	117	0.16	1415
Coelorinchus simorhynchus	0.90	18	0.12	
Gastropod nei	0.81	36	0.11	
Heart urchin	0.77	72	0.11	
Zeus capensis	0.48	9	0.07	1414
Rossia enigmatica	0.36	36	0.05	
Congiopodus spinifer	0.36	9	0.05	0
Coral - hard pink-red	0.31	0	0.04	
Starfish red B	0.26	9	0.04	
Exodromidia sp.	0.21	9	0.03	
Parapagurus dimorphus	0.08	9	0.01	
Lolligoncula mercatoris	0.07	18	0.01	
Total	721.20		99.61	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 154  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.35  
 start stop duration Lon E 16°0.16  
 TIME :16:31:40 16:41:35 9.9 (min) Purpose : 1  
 LOG : 3063.04 3063.57 0.5 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 201 200 Validity : 0  
 Towing dir: 0° Wire out : 470 m Speed : 3.2 km  
 Sorted : 2 Total catch: 2.15 Catch/hour: 13.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	8.04	24	61.86	
Maurollicus muelleri	4.96	12399	38.14	
Plankton	0.00	0	0.00	
Total	13.00		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 155  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.74  
 start stop duration Lon E 15°58.99  
 TIME :16:55:09 17:06:02 10.9 (min) Purpose : 1  
 LOG : 3064.22 3064.84 0.6 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 201 200 Validity : 0  
 Towing dir: 0° Wire out : 220 m Speed : 3.4 km  
 Sorted : 1 Total catch: 0.80 Catch/hour: 4.41

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	4.41	11	99.96	
Plankton	0.00	17	0.04	
Total	4.41		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 156  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.21  
 start stop duration Lon E 15°57.94  
 TIME :17:14:51 17:25:12 10.4 (min) Purpose : 1  
 LOG : 3065.29 3065.88 0.6 Region : 6100  
 FDEPTH: 30 30 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 100 m Speed : 3.4 km  
 Sorted : 3 Total catch: 2.52 Catch/hour: 14.59

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	14.49	29	99.36	
Plankton	0.09	3090	0.64	
Total	14.59		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 161  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.35  
 start stop duration Lon E 15°59.94  
 TIME :22:50:17 23:00:34 10.3 (min) Purpose : 1  
 LOG : 3085.81 3086.32 0.5 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 202 201 Validity : 0  
 Towing dir: 0° Wire out : 190 m Speed : 3.0 km  
 Sorted : 1 Total catch: 0.65 Catch/hour: 3.79

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	1.83	339	48.15	1470
Sepia australis	1.25	1442	33.08	
Inioteuthis capensis	0.46	385	12.15	
Maurollicus muelleri	0.18	438	4.62	
Helicolenus dactylopterus	0.04	29	1.08	
Lolligoncula mercatoris	0.02	6	0.46	
Phyllosoma	0.01	0	0.31	
Euphausiacea	0.00	0	0.09	
ISOPODS	0.00	0	0.06	
Total	3.79		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 157  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.40  
 start stop duration Lon E 16°0.60  
 TIME :19:42:33 19:52:23 9.8 (min) Purpose : 1  
 LOG : 3074.72 3075.25 0.5 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 199 200 Validity : 0  
 Towing dir: 0° Wire out : 470 m Speed : 3.3 km  
 Sorted : 2 Total catch: 2.27 Catch/hour: 13.85

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	7.75	159	55.97	1466
J E L L Y F I S H	4.70	12	33.94	
Paracallionymus costatus	0.55	214	3.96	
Maurollicus muelleri	0.46	0	3.31	
Rossia enigmatica	0.11	6	0.82	
Sepia hieronis	0.08	6	0.55	
Physiculus capensis	0.07	6	0.48	
SALPS	0.05	6	0.35	
Helicolenus dactylopterus	0.05	6	0.35	
Solenocera sp.	0.03	6	0.25	
Total	13.85		99.99	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 162  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.91  
 start stop duration Lon E 15°58.93  
 TIME :23:10:28 23:20:02 9.6 (min) Purpose : 1  
 LOG : 3086.79 3087.30 0.5 Region : 6100  
 FDEPTH: 30 30 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 80 m Speed : 3.2 km  
 Sorted : 7 Total catch: 6.85 Catch/hour: 42.98

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	36.09	100	83.97	
Maurollicus muelleri	5.67	0	13.19	
Euphausiacea	0.58	0	1.34	
Merluccius paradoxus	0.35	88	0.80	1471
Inioteuthis capensis	0.18	113	0.42	
Sepia australis	0.04	6	0.09	
Helicolenus dactylopterus	0.03	13	0.06	
Phyllosoma	0.02	0	0.04	
ISOPODS	0.02	0	0.04	
Lolligoncula mercatoris	0.01	6	0.03	
Paracallionymus costatus	0.01	13	0.03	
Engraulis sp., juvenile	0.00	6	0.00	
Total	42.98		100.01	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 158  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.83  
 start stop duration Lon E 15°59.59  
 TIME :20:04:25 20:14:12 9.8 (min) Purpose : 1  
 LOG : 3075.77 3076.29 0.5 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 200 200 Validity : 0  
 Towing dir: 0° Wire out : 220 m Speed : 3.2 km  
 Sorted : 5 Total catch: 4.52 Catch/hour: 27.70

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	14.40	25	52.00	
Lepidopus caudatus	9.19	6	33.19	
Merluccius paradoxus	2.82	227	10.18	1467
Inioteuthis capensis	0.54	306	1.95	
Sepia australis	0.44	37	1.57	
Helicolenus dactylopterus	0.17	123	0.62	
Maurollicus muelleri	0.06	135	0.22	
Phyllosoma	0.03	178	0.12	
Solenocera sp.	0.02	6	0.09	
Paracallionymus costatus	0.01	6	0.04	
Total	27.69		99.99	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 163  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.84  
 start stop duration Lon E 16°0.80  
 TIME :01:25:18 01:35:36 10.3 (min) Purpose : 1  
 LOG : 3093.55 3094.06 0.5 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 400 m Speed : 3.0 km  
 Sorted : 3 Total catch: 2.88 Catch/hour: 16.78

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	13.69	29	81.57	
Merluccius paradoxus	2.34	58	13.92	1472
Sepia hieronis	0.27	12	1.60	
Paracallionymus costatus	0.24	122	1.46	
SALPS	0.11	12	0.66	
Rossia enigmatica	0.06	12	0.35	
Solenocera sp.	0.05	6	0.28	
Maurollicus muelleri	0.02	17	0.10	
Inioteuthis capensis	0.01	6	0.07	
Phyllosoma	0.00	12	0.01	
Total	16.78		100.01	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 159  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.31  
 start stop duration Lon E 15°58.69  
 TIME :20:22:56 20:33:05 10.2 (min) Purpose : 1  
 LOG : 3076.70 3077.31 0.6 Region : 6100  
 FDEPTH: 30 30 Gear cond.: 0  
 BDEPTH: 200 200 Validity : 0  
 Towing dir: 0° Wire out : 100 m Speed : 3.6 km  
 Sorted : 2 Total catch: 1.52 Catch/hour: 8.94

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Maurollicus muelleri	5.97	0	66.75	
Merluccius paradoxus	1.36	614	15.18	1468
Sepia australis	0.53	136	5.94	
Euphausiacea	0.53	0	5.91	
Inioteuthis capensis	0.32	248	3.63	
ISOPODS	0.12	0	1.35	
Lolligoncula mercatoris	0.05	24	0.59	
Phyllosoma	0.05	0	0.51	
Helicolenus dactylopterus	0.01	12	0.09	
Leptocephalus	0.01	6	0.07	
Total	8.94		100.02	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 164  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.34  
 start stop duration Lon E 15°59.80  
 TIME :01:47:01 01:57:31 10.5 (min) Purpose : 1  
 LOG : 3094.55 3095.10 0.5 Region : 6100  
 FDEPTH: 80 80 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 200 m Speed : 3.1 km  
 Sorted : 1 Total catch: 1.23 Catch/hour: 7.03

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	2.82	480	40.16	1473
Aequorea forskalea	2.05	6	29.11	
Sepia australis	1.36	211	19.33	
Maurollicus muelleri	0.38	943	5.37	
Inioteuthis capensis	0.30	189	4.31	
Helicolenus dactylopterus	0.09	103	1.30	
Phyllosoma	0.02	103	0.28	
Paracallionymus costatus	0.01	6	0.16	
Total	7.03		100.01	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 160  
 DATE :20/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.84  
 start stop duration Lon E 16°1.02  
 TIME :22:28:12 22:38:35 10.4 (min) Purpose : 1  
 LOG : 3084.76 3085.29 0.5 Region : 6100  
 FDEPTH: 170 170 Gear cond.: 0  
 BDEPTH: 201 201 Validity : 0  
 Towing dir: 0° Wire out : 0 m Speed : 3.1 km  
 Sorted : 3 Total catch: 2.68 Catch/hour: 15.48

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Aequorea forskalea	11.56	23	74.68	
Merluccius paradoxus	3.11	81	20.09	1469
Paracallionymus costatus	0.60	237	3.85	
Sepia australis	0.13	6	0.82	
Sepia hieronis	0.05	12	0.30	
Helicolenus dactylopterus	0.04	6	0.26	
Euphausiacea	0.00	29	0.01	
Total	15.48		100.01	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 165  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.81  
 start stop duration Lon E 15°58.66  
 TIME :02:10:42 02:19:52 9.2 (min) Purpose : 1  
 LOG : 3095.68 3096.23 0.6 Region : 6100  
 FDEPTH: 30 30 Gear cond.: 0  
 BDEPTH: 202 202 Validity : 0  
 Towing dir: 0° Wire out : 75 m Speed : 3.6 km  
 Sorted : 2 Total catch: 2.11 Catch/hour: 13.76

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Maurollicus muelleri	8.83	44170	64.20	
Euphausiacea	1.56	0	11.33	
Merluccius paradoxus	1.35	314	9.79	1474
Aequorea forskalea	0.76	7	5.51	
Inioteuthis capensis	0.54	288	3.94	
Sepia australis	0.33	52	2.38	
Phyllosoma	0.18	0	1.32	
Lolligoncula mercatoris	0.12	39	0.90	
ISOPODS	0.08	0	0.57	
Lepidopus caudatus	0.01	7	0.05	1475
Total	13.76		99.99	



R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 166  
 DATE :21/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 30°6.36  
 start stop duration Purpose : 1  
 TIME :03:03:22 03:13:48 10.4 (min) Region : 6100  
 LOG : 3099.47 3100.01 0.5 Gear cond.: 0  
 FDEPTH: 202 201 Validity : 0  
 BDEPTH: 202 201 Speed : 3.1 km  
 Towing dir: 0° Wire out : 500 m Catch/hour: 279.13  
 Sorted : 49 Total catch: 48.52  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Merluccius paradoxus	66.16	1588	23.70
Genypterus capensis	40.27	127	14.43
Spatangus capensis	27.73	299	9.93
Merluccius capensis	26.46	35	9.48
Helicolenus dactylopterus	25.31	443	9.07
Lophius vomerinus	18.98	35	6.80
Holohalaelurus regani	15.53	63	5.56
Anemones, coral red	10.12	230	3.63
Cynoglossus zanzibarensis	8.97	161	3.22
Paracallionymus costatus	8.51	1703	3.05
Coelorinchus simorhynchus	6.96	92	2.49
Aequorea forskalea	6.85	12	2.45
Emmelichthys nitidus	3.16	6	1.13
Starfish red B	2.59	0	0.93
Heart urchin	1.99	104	0.71
Todaropsis eblanae	1.61	17	0.58
Solenocera sp.	1.45	184	0.52
Whelks	1.33	23	0.48
Chelidonichthys queketti	0.98	6	0.35
Sepia hieronis	0.93	23	0.33
Pterygosquilla armata capensis	0.87	173	0.31
Zeus capensis	0.64	12	0.23
Sepia australis	0.59	52	0.21
Rossia enigmatica	0.52	52	0.19
Exodromidia sp.	0.16	23	0.06
Gastropod nei	0.15	6	0.05
Gnathopis capensis	0.13	6	0.05
Starfish white 5 arms	0.06	12	0.02
Physiculus capensis	0.03	6	0.01
Sepia typica	0.03	6	0.01
Iniotheuthis capensis	0.03	12	0.01
Maurollicus muelleri	0.01	23	0.00
Total	279.13		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 167  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.83  
 start stop duration Purpose : 1  
 TIME :04:27:39 04:37:49 10.2 (min) Region : 6100  
 LOG : 3102.98 3103.55 0.6 Gear cond.: 0  
 FDEPTH: 170 170 Validity : 0  
 BDEPTH: 201 201 Speed : 3.4 km  
 Towing dir: 0° Wire out : 470 m Catch/hour: 18.53  
 Sorted : 3 Total catch: 3.14  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	12.33	0	66.56
Etrumeus whiteheadi	4.31	59	23.25
Lepidopus caudatus	1.89	6	10.19
Total	18.53		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 168  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.34  
 start stop duration Purpose : 1  
 TIME :04:53:23 05:03:09 9.8 (min) Region : 6100  
 LOG : 3104.30 3104.79 0.5 Gear cond.: 0  
 FDEPTH: 80 80 Validity : 0  
 BDEPTH: 201 201 Speed : 3.0 km  
 Towing dir: 0° Wire out : 220 m Catch/hour: 8.26  
 Sorted : 1 Total catch: 1.34  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	8.11	0	98.17
Sepia australis	0.11	6	1.30
Rossia enigmatica	0.03	18	0.41
Lolligoncula mercatoris	0.01	6	0.12
Total	8.26		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 169  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.98  
 start stop duration Purpose : 1  
 TIME :05:13:03 05:26:02 13.0 (min) Region : 6100  
 LOG : 3105.27 3105.94 0.7 Gear cond.: 0  
 FDEPTH: 30 30 Validity : 0  
 BDEPTH: 201 202 Speed : 3.1 km  
 Towing dir: 0° Wire out : 100 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Euphausiacea	0.00	0	0.00
Maurollicus muelleri	0.00	0	0.00
Total	0.00		0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 170  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.95  
 start stop duration Purpose : 1  
 TIME :07:17:00 07:26:41 9.7 (min) Region : 6100  
 LOG : 3112.87 3113.41 0.5 Gear cond.: 0  
 FDEPTH: 170 175 Validity : 0  
 BDEPTH: 201 200 Speed : 3.3 km  
 Towing dir: 0° Wire out : 470 m Catch/hour: 23.74  
 Sorted : 4 Total catch: 3.83  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	21.14	0	89.03
Etrumeus whiteheadi	2.60	37	10.97
Maurollicus muelleri	0.00	0	0.00
Total	23.74		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 171  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.40  
 start stop duration Purpose : 1  
 TIME :07:38:53 07:48:50 9.9 (min) Region : 6100  
 LOG : 3113.95 3114.49 0.5 Gear cond.: 0  
 FDEPTH: 80 78 Validity : 0  
 BDEPTH: 200 200 Speed : 3.3 km  
 Towing dir: 0° Wire out : 220 m Catch/hour: 3.86  
 Sorted : 1 Total catch: 0.64  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	3.86	0	100.00
Helicolenus dactylopterus	0.00	0	0.00
Maurollicus muelleri	0.00	0	0.00
Total	3.86		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 172  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.93  
 start stop duration Purpose : 1  
 TIME :07:56:41 08:06:39 10.0 (min) Region : 6100  
 LOG : 3114.86 3115.39 0.5 Gear cond.: 0  
 FDEPTH: 33 25 Validity : 0  
 BDEPTH: 200 200 Speed : 3.2 km  
 Towing dir: 0° Wire out : 100 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
N O C A T C H	0.00	0	0.00
Total	0.00		0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 173  
 DATE :21/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 30°5.89  
 start stop duration Purpose : 1  
 TIME :09:00:41 09:11:53 11.2 (min) Region : 6100  
 LOG : 3118.29 3118.90 0.6 Gear cond.: 0  
 FDEPTH: 201 201 Validity : 0  
 BDEPTH: 201 201 Speed : 3.2 km  
 Towing dir: 0° Wire out : 200 m Catch/hour: 420.58  
 Sorted : 79 Total catch: 78.51  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Etrumeus whiteheadi	115.18	1538	27.39
Spatangus capensis	91.07	980	21.65
Merluccius paradoxus	52.50	1146	12.48
Merluccius capensis	27.96	27	6.65
Chelidonichthys capensis	21.00	38	4.99
Raja wallacei	13.93	5	3.31
Merluccius capensis	11.36	16	2.70
Chelidonichthys queketti	10.61	80	2.52
Coelorinchus simorhynchus	8.57	59	2.04
Raja straeleni	8.36	5	1.99
Holohalaelurus regani	8.04	38	1.91
Paracallionymus costatus	7.45	825	1.77
Sepia australis	5.36	359	1.27
Helicolenus dactylopterus	5.36	145	1.27
Cynoglossus zanzibarensis	4.18	70	0.99
Congiopodus spinifer	3.54	295	0.84
Aequorea forskalea	3.48	0	0.83
Merluccius paradoxus	3.32	450	0.79
Lophius vomerinus	2.79	5	0.66
Emmelichthys nitidus	2.57	16	0.61
Merluccius capensis	2.20	5	0.52
Genypterus capensis	1.93	16	0.46
Sea pens	1.71	11	0.41
Anemones, coral red	1.66	32	0.39
Trachurus capensis	1.50	11	0.36
Todaropsis eblanae	1.34	21	0.32
Whelks	1.13	21	0.27
Starfish red B	1.07	102	0.25
Gastropod nei	0.59	27	0.14
Rossia enigmatica	0.32	16	0.08
Pterygosquilla armata capensis	0.25	48	0.06
Heart urchin	0.17	11	0.04
Lolligoncula mercatoris	0.07	21	0.02
Sepia dubia	0.04	5	0.01
Sufflogobius bibarbatatus	0.01	5	0.00
Total	420.58		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 174  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.87  
 start stop duration Purpose : 1  
 TIME :10:24:13 10:34:16 10.1 (min) Region : 6100  
 LOG : 3123.31 3123.84 0.5 Gear cond.: 0  
 FDEPTH: 170 170 Validity : 0  
 BDEPTH: 201 201 Speed : 3.1 km  
 Towing dir: 0° Wire out : 410 m Catch/hour: 2.15  
 Sorted : 0 Total catch: 0.36  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Etrumeus whiteheadi	0.42	6	0.00
Aglaura or ctenophora	0.11	18	0.00
J E L L Y F I S H	1.31	0	0.00
P O L Y C H A E T A	0.01	18	0.00
Maurollicus muelleri	0.30	0	0.00
Total	2.15		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 175  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.17  
 start stop duration Purpose : 1  
 TIME :10:49:03 10:59:34 10.5 (min) Region : 6100  
 LOG : 3124.53 3125.07 0.5 Gear cond.: 0  
 FDEPTH: 80 80 Validity : 0  
 BDEPTH: 201 201 Speed : 3.1 km  
 Towing dir: 0° Wire out : 200 m Catch/hour: 13.97  
 Sorted : 2 Total catch: 2.45  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
J E L L Y F I S H	13.97	29	100.00
Maurollicus muelleri	0.00	0	0.00
Total	13.97		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 176  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.76  
 start stop duration Purpose : 1  
 TIME :11:04:59 11:14:39 9.7 (min) Region : 6100  
 LOG : 3125.32 3125.83 0.5 Gear cond.: 0  
 FDEPTH: 30 30 Validity : 0  
 BDEPTH: 201 202 Speed : 3.1 km  
 Towing dir: 0° Wire out : 0 m Catch/hour: 16.66  
 Sorted : 3 Total catch: 2.68  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
J E L L Y F I S H	16.66	31	100.00
Total	16.66		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 177  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.70  
 start stop duration Purpose : 1  
 TIME :13:27:48 13:38:07 10.3 (min) Region : 6100  
 LOG : 3132.27 3132.83 0.6 Gear cond.: 0  
 FDEPTH: 0 170 Validity : 0  
 BDEPTH: 201 201 Speed : 3.3 km  
 Towing dir: 0° Wire out : 470 m Catch/hour: 4.36  
 Sorted : 1 Total catch: 0.75  
 SPECIES CATCH/HOUR % OF TOT. C SAMP

weight	numbers		
Aequorea forskalea	4.36	0	100.00
Maurollicus muelleri	0.00	0	0.00
Total	4.36		100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 178  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.01  
 start stop duration Purpose : 1  
 TIME :13:49:46 13:59:45 10.0 (min) Region : 6100  
 LOG : 3133.37 3133.94 0.6 Gear cond.: 0  
 FDEPTH: 85 73 Validity : 0  
 BDEPTH: 201 201 Speed : 3.4 km  
 Towing dir: 0° Wire out : 220 m Catch/hour: 2.95  
 Sorted : 0 Total catch: 0.49  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Euphausiacea 0.00 6 0.00  
 Engraulis capensis 0.00 6 0.00  
 JELLYFISH 2.95 6 0.00  
 Maurolicus muelleri 0.00 0 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 179  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.43  
 start stop duration Purpose : 1  
 TIME :14:08:43 14:18:43 10.0 (min) Region : 6100  
 LOG : 3134.40 3134.98 0.6 Gear cond.: 0  
 FDEPTH: 38 38 Validity : 0  
 BDEPTH: 201 201 Speed : 3.5 km  
 Towing dir: 0° Wire out : 120 m Catch/hour: 3.00  
 Sorted : 1 Total catch: 0.50  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Aequorea forskalea 3.00 12 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 180  
 DATE :21/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°5.02  
 start stop duration Purpose : 1  
 TIME :14:56:21 15:06:04 10.0 (min) Region : 6100  
 LOG : 3136.70 3137.20 0.5 Gear cond.: 0  
 FDEPTH: 200 199 Validity : 0  
 BDEPTH: 200 199 Speed : 2.7 km  
 Towing dir: 0° Wire out : 500 m Catch/hour: 610.22  
 Sorted : 102 Total catch: 101.70  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Etrumeus whiteheadi 234.00 3282 38.35  
 Spatangus capensis 86.40 1026 14.16  
 Merluccius paradoxus 60.96 1458 9.99 1448  
 Merluccius capensis 45.96 54 7.53 1444  
 Merluccius capensis 32.16 36 5.27 1445  
 Helicolenus dactylopterus 23.52 588 3.85 1446  
 Lophius vomerinus 18.00 24 2.95 1440  
 Holohalaelurus regani 12.36 78 2.03  
 Anemones, coral red 11.82 294 1.94  
 Paracallionymus costatus 10.98 1374 1.80  
 Squalus mitsukurii 10.44 6 1.71  
 Sepia australis 9.30 666 1.52  
 Coelorinchus simorhynchus 7.80 90 1.28  
 Raja straeleni 6.60 6 1.08  
 Chelidonichthys capensis 6.48 12 1.06 1442  
 Merluccius paradoxus 5.46 678 0.89 1449  
 Chelidonichthys queketti 4.80 42 0.79 1443  
 Cynoglossus zanzibarensis 4.68 78 0.77 1447  
 Squalus megalops 3.48 6 0.57  
 Lepidopus caudatus 3.12 6 0.51  
 Whelks 2.52 48 0.41  
 J E L L Y F I S H 2.46 0 0.40  
 Genypterus capensis 1.44 6 0.24 1441  
 Todaropsis eblanae 1.14 18 0.19 1450  
 Heart urchin 1.08 72 0.18  
 Starfish - red D 0.67 6 0.11  
 Rossia enigmatica 0.53 36 0.09  
 Gastropod nei 0.48 24 0.08  
 Sepia hieronis 0.42 12 0.07  
 Myxine capensis 0.37 6 0.06  
 Starfish red A 0.18 18 0.03  
 Starfish white 5 arms 0.13 6 0.02  
 Nudibranchs 0.10 6 0.02  
 Pterygosquilla armata capensis 0.08 18 0.01  
 Starfish - fleshy A 0.08 6 0.01  
 Lolligoncula mercatoris 0.07 30 0.01  
 Sepia australis, juvenile 0.06 36 0.01  
 Starfish - purple 0.05 6 0.01  
 Sepia hieronis, juvenile 0.03 6 0.00  
 Total 610.22 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 181  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.74  
 start stop duration Purpose : 1  
 TIME :16:38:48 16:48:00 9.2 (min) Region : 6100  
 LOG : 3142.66 3143.17 0.5 Gear cond.: 0  
 FDEPTH: 170 175 Validity : 0  
 BDEPTH: 201 200 Speed : 3.4 km  
 Towing dir: 0° Wire out : 470 m Catch/hour: 6.72  
 Sorted : 1 Total catch: 1.03  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Aequorea forskalea 6.72 0 100.00  
 Euphausiacea 0.00 0 0.00  
 ISOPODS 0.00 0 0.00  
 P O L Y C H A E T A 0.00 0 0.00  
 Maurolicus muelleri 0.00 0 0.00  
 Total 6.72 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 182  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°6.20  
 start stop duration Purpose : 1  
 TIME :17:00:44 17:10:58 10.2 (min) Region : 6100  
 LOG : 3143.79 3144.41 0.6 Gear cond.: 0  
 FDEPTH: 80 80 Validity : 0  
 BDEPTH: 201 200 Speed : 3.6 km  
 Towing dir: 0° Wire out : 220 m Catch/hour: 2.11  
 Sorted : 0 Total catch: 0.36  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Aequorea forskalea 2.11 6 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 183  
 DATE :21/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 30°5.71  
 start stop duration Purpose : 1  
 TIME :17:20:15 17:30:30 10.3 (min) Region : 6100  
 LOG : 3144.91 3145.50 0.6 Gear cond.: 0  
 FDEPTH: 30 33 Validity : 0  
 BDEPTH: 201 201 Speed : 3.5 km  
 Towing dir: 0° Wire out : 100 m Catch/hour: 10.19  
 Sorted : 2 Total catch: 1.74  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Aequorea forskalea 10.19 23 99.95  
 ISOPODS 0.01 140 0.05  
 Total 10.19 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 184  
 DATE :22/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°20.61  
 start stop duration Purpose : 3  
 TIME :05:09:06 05:39:49 30.7 (min) Region : 6100  
 LOG : 3217.50 3219.18 1.7 Gear cond.: 0  
 FDEPTH: 616 608 Validity : 0  
 BDEPTH: 616 608 Speed : 3.3 km  
 Towing dir: 0° Wire out : 1570 m Catch/hour: 458.14  
 Sorted : 234 Total catch: 234.49  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Merluccius paradoxus 181.70 168 39.66 1454  
 Coelorinchus braueri 62.52 703 13.65  
 Helicolenus dactylopterus 20.91 72 4.56 1452  
 Raja leopardus 19.54 35 4.26  
 Malacocephalus laevis 17.94 63 3.91  
 Selachophidium guentheri 17.15 229 3.74  
 Coelorinchus matama 16.53 221 3.61  
 Bathyraxa smithii, female 16.02 2 3.50  
 Chaceon maritae 14.85 184 3.24  
 Etmopterus brachyurus 13.21 178 2.88  
 Raja confundens 11.41 51 2.49  
 Trachyscorpia eschmeyerii 10.94 37 2.39 1453  
 Merluccius paradoxus 8.21 12 1.79 1455  
 Hydrolagus sp. 6.45 33 1.41  
 Lophius vomerinus 5.00 2 1.09 1451  
 Notacanthus sexspinis 4.94 123 1.08  
 Funchalia woodwardi 4.83 322 1.05  
 Lepidion capensis 4.24 27 0.93  
 Starfish - fleshy 3.32 6 0.72  
 Bristle worms (straws) 3.01 485 0.66  
 Todarodes angolemsis 2.50 6 0.55 1456  
 Sea cucumber purple 2.42 4 0.53  
 Starfish - many arms 1.66 830 0.36  
 Photichthys argenteus 1.31 61 0.29  
 Todarodes angolemsis 1.25 2 0.27 1457  
 Ranzania laevis 0.92 2 0.20  
 Anemones, pink 0.92 2 0.20  
 Rossia enigmatica 0.80 37 0.17  
 Nezumia sp. 0.70 12 0.15  
 Psychrolutes macrocephalus 0.52 12 0.11  
 Raja confundens, juvenile 0.44 10 0.10  
 Plesionika martia 0.24 59 0.05  
 Lucigadus ori 0.23 29 0.05  
 Anemone - purple 0.23 2 0.05  
 Myxine capensis 0.21 4 0.05  
 Raja leopardus, juvenile 0.18 8 0.04  
 Kuronezumia leonis 0.16 2 0.03  
 Coral, deep water 0.15 6 0.03  
 Diretmus argenteus 0.11 2 0.02  
 Bathophilus sp. 0.10 4 0.02  
 Tripterophycis gilchristi 0.08 2 0.02  
 Gastropod nei 0.05 6 0.01  
 Neoscopelus macrolepidotus 0.05 2 0.01  
 Hoplostethus cadonati 0.04 2 0.01  
 Plesiopeneaus edwardsianus 0.04 2 0.01  
 Parapagurus pilosimanus 0.03 2 0.01  
 Starfish white 5 arms 0.03 2 0.01  
 Sergia sp. 0.02 4 0.00  
 PARALEPIDIDAE 0.02 2 0.00  
 Electrona risso 0.01 2 0.00  
 Pasiphaea sp. 0.01 2 0.00  
 Total 458.14 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 185  
 DATE :22/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 30°24.52  
 start stop duration Purpose : 3  
 TIME :07:07:04 07:37:12 30.1 (min) Region : 6100  
 LOG : 3226.83 3228.43 1.6 Gear cond.: 0  
 FDEPTH: 530 535 Validity : 0  
 BDEPTH: 530 535 Speed : 3.2 km  
 Towing dir: 0° Wire out : 1350 m Catch/hour: 1618.65  
 Sorted : 813 Total catch: 813.10  
 SPECIES CATCH/HOUR % OF TOT. C SAMP  
 weight numbers  
 Oreosoma atlanticum 969.48 5863 59.89 1458  
 Merluccius paradoxus 244.86 346 15.13 1462  
 Helicolenus dactylopterus 117.45 512 7.26 1459  
 Merluccius paradoxus 109.49 221 6.76 1463  
 Lophius vomerinus 35.83 10 2.21 1460  
 Malacocephalus laevis 21.90 88 1.35  
 Coelorinchus braueri 20.90 721 1.29  
 Chaceon maritae 17.92 205 1.11  
 Selachophidium guentheri 17.44 257 1.08  
 Hydrolagus sp. 15.93 30 0.98  
 Sea cucumber purple 8.56 22 0.53  
 Raja confundens 7.56 16 0.47  
 Genypterus capensis 5.97 2 0.37 1461  
 Starfish - fleshy 4.68 10 0.29  
 Squalus mitsukurii 3.98 2 0.25  
 Coelorinchus matama 3.72 20 0.23  
 Bassanago albescens 3.09 8 0.19  
 Coelorinchus matama 1.34 62 0.08 0  
 Todarodes angolemsis 1.31 2 0.08 1464  
 Starfish - many arms 1.23 352 0.08  
 Rossia enigmatica 1.17 50 0.07  
 Beryx splendens 1.11 2 0.07 1465  
 Raja leopardus 1.00 8 0.06  
 Lucigadus ori 0.93 82 0.06  
 Notacanthus sexspinis 0.47 6 0.03  
 Anemones, pink 0.31 2 0.02  
 Bristle worms (straws) 0.27 38 0.02  
 Whelks 0.17 2 0.01  
 Tripterophycis gilchristi 0.16 6 0.01  
 Bathypolypus valdiviae 0.13 2 0.01  
 Etmopterus brachyurus 0.08 2 0.01  
 Neoscopelus macrolepidotus 0.06 2 0.00  
 Photichthys argenteus 0.06 6 0.00  
 Funchalia woodwardi 0.03 4 0.00  
 Symblophorus boops 0.03 2 0.00  
 Gastropod nei 0.02 2 0.00  
 Stoloteuthis sp. 0.00 2 0.00  
 Total 1618.65 100.00

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 186					
DATE	start	stop	duration	GEAR TYPE: BT NO:	6	POSITION:Lat	S 30°21.53	Lon	E 15°97.37
TIME	09:28:09	09:58:16	30.1 (min)	Purpose	3	Region	: 6100	Gear cond.:	0
LOG	: 3239.77	3241.38	1.6	Validity	0	Speed	: 3.2 km	Catch/hour:	1434.34
FDEPTH:	413	409		Wire out	: 1050 m	Sorted	: 454	Total catch:	720.04
BDEPTH:	413	409							
Towing dir:	0°								
Sorted	: 454								
SPECIES									
	weight	numbers							
Merluccius paradoxus	254.98	781	17.78	1487					
Epigonus telescopus	235.06	0	16.39						
Lepidopus caudatus	183.27	191	12.78						
Merluccius paradoxus	173.31	173	12.08	1488					
Merluccius paradoxus	107.57	163	7.50	1489					
Bassanago albescens	88.65	161	6.18						
Malacocephalus laevis	79.68	155	5.56						
Coelorinchus simorhynchus	71.71	1122	5.00						
Helicolenus dactylopterus	63.75	265	4.44	1480					
Lophius vomerinus	29.88	14	2.08	1482					
Starfish - fleshy	20.72	263	1.44						
Brama brama	19.12	12	1.33	1481					
Squalus mitsukurii	17.93	8	1.25						
Parapagurus pilosimanus	16.73	669	1.17						
Scyliorhinus capensis	12.15	16	0.85						
Holohalaelurus regani	11.35	28	0.79						
Centrolophus niger	8.57	4	0.60						
Anemones, white	8.18	223	0.57						
Todaropsis eblanae	3.82	24	0.27	1490					
Genypterus capensis	3.63	2	0.25	1486					
Cyttus traversi	3.19	6	0.22						
Sponges - round	3.00	120	0.21						
Hoplostethus mediterraneus	1.98	24	0.14						
Rossia enigmatica	1.77	96	0.12						
Todarodes angolensis	1.71	2	0.12	1485					
Beryx splendens	1.55	12	0.11	1483					
Gastropod nei	1.42	167	0.10						
Cruriraja paromaculata	1.39	2	0.10						
Starfish white 5 arms	0.89	72	0.06						
Paracallionymus costatus	0.80	159	0.06						
Starfish - giant	0.80	2	0.06						
Todarodes angolensis	0.72	2	0.05	1484					
Lucigadus ori	0.71	120	0.05						
Helicolenus dactylopterus	0.62	24	0.04	1491					
Spatangus capensis	0.58	8	0.04						
Starfish red A	0.58	8	0.04						
Tripteroptychys gilchristi	0.53	40	0.04						
Bathophilus sp.	0.39	8	0.03						
Whelks	0.29	24	0.02						
Mursia cristimanus	0.29	40	0.02						
Bathynectes piperitus	0.22	8	0.02						
Rochinia sp.	0.20	48	0.01						
Amalda bulloides	0.18	48	0.01						
Stereomastis sp.	0.18	40	0.01						
Cone gastropod	0.18	8	0.01						
Sepia dubia	0.08	24	0.01						
Parapagurus dimorphus	0.03	8	0.00						
Lampanyctodes Hectoris	0.02	8	0.00						
Total	1434.34		100.00						

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 189					
DATE	start	stop	duration	GEAR TYPE: BT NO:	6	POSITION:Lat	S 29°51.67	Lon	E 15°18.76
TIME	:17:14:18	17:34:40	20.4 (min)	Purpose	3	Region	: 6100	Gear cond.:	0
LOG	: 3295.62	3296.66	1.0	Validity	0	Speed	: 3.1 kn	Catch/hour:	461.82
FDEPTH:	204	205		Wire out	: 500 m	Sorted	: 80	Total catch:	156.79
BDEPTH:	204	205							
Towing dir:	0°								
Sorted	: 80								
SPECIES									
	weight	numbers							
Emmelichthys nitidus	197.94	9897	42.86						
Parapagurus dimorphus	67.16	6716	14.54						
Merluccius capensis	45.95	35	9.95	1525					
Thyrssites atun	32.40	29	7.02	1520					
Lophius vomerinus	19.44	21	4.21	1523					
Chelidonichthys capensis	14.73	24	3.19	1522					
Chelidonichthys queketti	14.14	80	3.06	1521					
Spatangus capensis	9.07	100	1.96						
Sepia australis	8.95	0	1.94						
Holohalaelurus regani	7.95	32	1.72						
Cynoglossus zanzibarensis	6.48	47	1.40	1527					
Squalus mitsukurii	6.19	15	1.34						
Zeus capensis	5.30	35	1.15	1528					
Armoglossus capensis	4.32	619	0.94						
Merluccius capensis	3.83	3	0.83	1524					
Scyliorhinus capensis	3.53	15	0.77						
Helicolenus dactylopterus	3.53	236	0.77	1526					
Paracallionymus costatus	3.03	445	0.66						
Sea urchin	1.52	12	0.33						
Congiopodus spinifer	1.47	12	0.32						
Sepia australis	1.47	191	0.32	0					
Whelks	1.30	12	0.28						
Chelidonichthys queketti	0.70	24	0.15	1529					
Heart urchin	0.35	12	0.08						
Starfish - red D	0.26	12	0.06						
P O L Y C H A E T A	0.25	59	0.05						
Starfish - twinkle	0.21	12	0.05						
Starfish - fleshy	0.18	12	0.04						
Starfish - purple	0.09	24	0.02						
Mudibranchs	0.05	12	0.01						
Turbo sp. Gastropod	0.02	12	0.01						
Total	461.82		100.00						

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 190					
DATE	start	stop	duration	GEAR TYPE: BT NO:	6	POSITION:Lat	S 30°6.63	Lon	E 14°48.51
TIME	:04:57:20	05:28:14	30.9 (min)	Purpose	3	Region	: 6100	Gear cond.:	0
LOG	: 3335.85	3337.35	1.5	Validity	0	Speed	: 2.9 kn	Catch/hour:	512.11
FDEPTH:	495	494		Wire out	: 1250 m	Sorted	: 264	Total catch:	263.74
BDEPTH:	495	494							
Towing dir:	0°								
Sorted	: 264								
SPECIES									
	weight	numbers							
Merluccius paradoxus	120.39	221	23.51	1535					
Merluccius paradoxus	78.64	198	15.36	1536					
Helicolenus dactylopterus	67.96	351	13.27	1531					
Merluccius paradoxus	48.54	146	9.48	1533					
Lophius vomerinus	33.01	16	6.45	1532					
Parapagurus pilosimanus	32.43	1157	6.33						
Genypterus capensis	23.88	10	4.66	1530					
Hydrolagus sp.	14.76	23	2.88						
Coelorinchus simorhynchus	14.68	122	2.87						
Selachophidium guentheri	11.07	198	2.16						
Anemones, white	8.60	118	1.68						
Raja confundens	8.16	10	1.59						
Raja doutrei, female	6.80	2	1.33						
Malacocephalus laevis	6.02	19	1.18						
Anemones, pink	5.83	41	1.14						
Coelorinchus braueri	3.59	212	0.70						
Squalus mitsukurii	3.38	2	0.66						
Sponges - round	2.95	76	0.58						
Anemones, coral red	2.70	64	0.53						
Psychrolutes macrocephalus	2.52	10	0.49						
Bassanago albescens	2.49	12	0.49						
Starfish - fleshy	2.39	6	0.47						
Todarodes angolensis	2.33	2	0.46	1534					
Coelorinchus matama	2.17	41	0.42						
Starfish - many arms	1.61	322	0.31						
Lucigadus ori	1.19	89	0.23						
Rossia enigmatica	0.90	45	0.18						
Funchalia woodwardi	0.75	103	0.15						
Hoplostethus mediterraneus	0.46	6	0.09						
Epigonus telescopus	0.33	35	0.06						
Paracallionymus costatus	0.32	49	0.06						
Helicolenus dactylopterus	0.27	10	0.05	1537					
Photichthys argenteus	0.25	21	0.05						
Whelks	0.18	4	0.04						
Rochinia sp.	0.13	31	0.02						
Gastropod nei	0.12	17	0.02						
C R A B S	0.06	2	0.01						
Tripteroptychys gilchristi	0.04	2	0.01						
Shark eggs	0.04	6	0.01						
Stereomastis sp.	0.04	12	0.01						
Physiculus capensis	0.03	4	0.01						
Congiopodus spinifer	0.02	2	0.00						
Raja leoparden, juvenile	0.02	2	0.00						
Sepia sp. New SA	0.02	4	0.00						
Raja confundens, juvenile	0.02	2	0.00						
Heart urchin	0.01	2	0.00						
Notopogon macrosolen	0.01	2	0.00						
Chaceon maritae, juvenile	0.01								

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 191		J E L L Y F I S H		11.96	0	1.48
DATE	: 23/02/2012	GEAR TYPE: BT NO:	6	POSITION: Lat	S 29°58.22	Longitude	E 15°4.77			1568
TIME	: 08:19:39	start stop	08:49:47	duration	30.1 (min)	Purpose	: 3			
LOG	: 3357.54	3359.07	1.5	Region	: 6100	Gear cond.:	0			
FDEPTH:	367	367		Validity	: 0	Speed	: 3.1 km			
BDEPTH:	367	367		Catch/hour:	1617.93	Sorted	: 461	Wire out	: 900 m	
Towing dir:	0°	Wire out	: 900 m	Catch/hour:	1617.93	Sorted	: 461	Wire out	: 900 m	
Sorted	: 461	Total catch:	812.74	CATCH/HOUR	% OF TOT. C	SAMP				
SPECIES		weight	numbers							
Merluccius paradoxus		234.90	233	14.52		1543				
Helicolenus dactylopterus		198.87	1069	12.29		1550				
Anemones, pink		184.14	1228	11.38						
Coelorrinchus simorhynchus		171.20	2634	10.58						
Merluccius paradoxus		161.25	733	9.97		1544				
Merluccius paradoxus		117.45	159	7.26		1545				
Genypterus capensis		100.53	102	6.21		1538				
Malacocephalus laevis		82.81	488	5.12						
Zeus capensis		51.56	55	3.19		1551				
Holohalaelurus regani		43.80	137	2.71						
Merluccius capensis		40.61	18	2.51		1547				
Scylliorhinus capensis		30.66	72	1.89						
Thyrssites atun		27.27	20	1.69		1539				
Galeus polli		24.29	145	1.50						
Brama brama		17.92	18	1.11		1540				
Hoplostethus mediterraneus		16.44	368	1.02						
Epigonus telescopus		11.96	68	0.74						
Spatangus capensis		11.45	110	0.71						
Centrolophus niger		8.96	2	0.55						
Anemones, coral red		8.41	739	0.52						
Starfish - fleshy		7.55	37	0.47						
Lucigadus ori		5.89	541	0.36						
Lepidopus caudatus		5.77	6	0.36						
Cynoglossus zanzibarensis		5.52	92	0.34		1548				
Squalus mitsukurii		4.98	4	0.31						
Rossia enigmatica		4.86	368	0.30						
Starfish - many arms		4.58	1019	0.28						
Todaropsis eblanae		4.42	37	0.27		1549				
Todarodes angolensis		3.98	8	0.25		1541				
Raja confundens		3.58	4	0.22						
Starfish white 5 arms		3.24	649	0.20						
Merluccius capensis		2.99	2	0.18		1546				
Tripterophycis gilchristi		2.96	277	0.18						
Todarodes angolensis		1.99	2	0.12		1542				
Bathynectes piperitus		1.93	92	0.12						
Parapagurus pilosimanus		1.93	74	0.12						
Paracallionymus costatus		1.84	295	0.11						
Gastropod nei		1.36	129	0.08						
Whelks		1.01	19	0.06						
Raja leopardus		1.00	2	0.06						
Anemone - purple 2		0.83	55	0.05						
Selachophidium guentheri		0.59	19	0.04						
Sepia hieronis		0.53	19	0.03						
Sepia sp. New SA		0.07	19	0.00						
Total			1617.93			100.00				

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 194		J E L L Y F I S H		11.96	0	1.48
DATE	: 24/02/2012	GEAR TYPE: BT NO:	6	POSITION: Lat	S 29°17.37	Longitude	E 16°16.49			1570
TIME	: 07:42:32	start stop	08:12:39	duration	30.1 (min)	Purpose	: 3			
LOG	: 3474.59	3476.22	1.6	Region	: 6100	Gear cond.:	0			
FDEPTH:	157	157		Validity	: 0	Speed	: 3.3 km			
BDEPTH:	157	157		Catch/hour:	359.08	Sorted	: 132	Wire out	: 450 m	
Towing dir:	0°	Wire out	: 450 m	Catch/hour:	359.08	Sorted	: 132	Wire out	: 450 m	
Sorted	: 132	Total catch:	180.14	CATCH/HOUR	% OF TOT. C	SAMP				
SPECIES		weight	numbers							
Yellow sponges		147.51	0	41.08						
Pterygosquilla armata capensis		49.04	3377	13.66						
Starfish		31.89	0	8.88						
Merluccius capensis		30.30	203	8.44		1580				
Merluccius paradoxus		18.74	809	5.22		1581				
Brama brama		12.80	6	3.56		1576				
Sufflogobius bibarbatatus		8.97	1340	2.50						
Sepia australis		7.02	437	1.95						
Todaropsis eblanae		6.18	136	1.72		1587				
J E L L Y F I S H		5.98	0	1.67						
Chelidonichthys capensis		5.18	24	1.44		1579				
Helicolenus dactylopterus		5.14	335	1.43		1584				
Paracallionymus costatus		4.47	572	1.24						
Raja straeleni		3.99	2	1.11						
Heart urchin		3.11	32	0.87						
Lophius vomerinus		2.87	28	0.80		1582				
Lolligonula mercatoris		2.63	1096	0.73						
Merluccius paradoxus		2.11	235	0.59		1583				
Starfish red A		1.83	283	0.51						
Macropipus australis		1.69	56	0.47						
Sepia hieronis		1.64	56	0.46						
Jasus lalandii		1.48	6	0.41		1578				
Cynoglossus zanzibarensis		1.12	16	0.31		1585				
Heart urchin		0.80	20	0.22		0				
Exodromidia sp.		0.41	32	0.12						
Genypterus capensis		0.40	20	0.11		1586				
Starfish - purple		0.32	56	0.09						
Jasus lalandii		0.32	2	0.09		1577				
Conglopodus spinifer		0.28	4	0.08						
Nudibranchs		0.25	16	0.07						
Gastropod nei		0.19	24	0.05						
MYCTOPHIDAE		0.14	20	0.04						
Goneplax angulata		0.13	20	0.04						
Raja straeleni, juvenile		0.11	8	0.03						
Turritella		0.05	8	0.01						
Iniotheuthis capensis		0.01	4	0.00						
Total			359.08			100.00				

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 192		J E L L Y F I S H		11.96	0	1.48
DATE	: 23/02/2012	GEAR TYPE: BT NO:	6	POSITION: Lat	S 29°34.02	Longitude	E 15°42.85			1568
TIME	: 13:50:29	start stop	14:20:48	duration	30.3 (min)	Purpose	: 3			
LOG	: 3401.68	3403.20	1.5	Region	: 6100	Gear cond.:	0			
FDEPTH:	181	181		Validity	: 0	Speed	: 3.0 km			
BDEPTH:	181	181		Catch/hour:	1035.06	Sorted	: 165	Wire out	: 500 m	
Towing dir:	0°	Wire out	: 500 m	Catch/hour:	1035.06	Sorted	: 165	Wire out	: 500 m	
Sorted	: 165	Total catch:	523.05	CATCH/HOUR	% OF TOT. C	SAMP				
SPECIES		weight	numbers							
Merluccius paradoxus		230.05	5254	22.23		1561				
Etrumeus whiteheadi		207.78	2968	20.07						
Spatangus capensis		198.88	1658	19.21						
Sepia australis		58.62	5379	5.66						
Coelorrinchus simorhynchus		54.91	669	5.31						
Chelidonichthys capensis		53.43	107	5.16		1552				
Merluccius capensis		42.74	51	4.13		1559				
Thyrssites atun		28.30	22	2.73		1555				
Paracallionymus costatus		27.16	2612	2.62						
Raja straeleni		25.73	30	2.49						
Merluccius capensis		20.38	28	1.97		1560				
Lophius vomerinus		19.79	22	1.91		1554				
Holohalaelurus regani		11.28	46	1.09						
Merluccius paradoxus		8.61	801	0.83		1562				
Brama brama		6.93	6	0.67		1556				
Sardinops ocellatus		5.89	75	0.57						
J E L L Y F I S H		5.34	15	0.52						
Lepidopus caudatus		5.28	135	0.51		0				
Cynoglossus zanzibarensis		4.75	74	0.46		1563				
Lepidopus caudatus		3.96	4	0.38						
Helicolenus dactylopterus		2.37	178	0.23		1564				
Chelidonichthys queketti		1.98	18	0.19		1553				
Heart urchin		1.95	59	0.19						
Todaropsis eblanae		1.63	89	0.16		1565				
Emmelichthys nitidus		1.39	2	0.13		1558				
Genypterus capensis		1.27	2	0.12		1557				
Zeus capensis		1.22	45	0.12		1566				
Gastropod nei		0.83	15	0.08						
PAGUROIDEA		0.73	15	0.07						
Whelks		0.68	15	0.07						
Conglopodus spinifer		0.49	4	0.05						
Parapagurus dimorphus		0.31	30	0.03						
Starfish white 5 arms		0.16	30	0.02						
Exodromidia sp.		0.09	15	0.01						
Starfish - purple		0.08	15	0.01						
Amalda bullioides		0.06	15	0.01						
Total			1035.06			100.00				

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 195		J E L L Y F I S H		11.96	0	1.48
DATE	: 24/02/2012	GEAR TYPE: BT NO:	6	POSITION: Lat	S 29°26.33	Longitude	E 15°57.77			1568
TIME	: 10:46:30	start stop	11:16:54	duration	30.4 (min)	Purpose	: 3			
LOG	: 3495.55	3497.09	1.5	Region	: 6100	Gear cond.:	0			
FDEPTH:	179	179		Validity	: 0	Speed	: 3.0 km			
BDEPTH:	179	179		Catch/hour:	473.19	Sorted	: 117	Wire out	: 450 m	
Towing dir:	0°	Wire out	: 450 m	Catch/hour:	473.19	Sorted	: 117	Wire out	: 450 m	
Sorted	: 117	Total catch:	239.75	CATCH/HOUR	% OF TOT. C	SAMP				
SPECIES		weight	numbers							
Merluccius paradoxus		162.83	2582	34.41		1596				
Merluccius capensis		63.16	219	13.35		1588				
Sepia australis		47.37	2203	10.01						

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 196  
 DATE :24/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 28°44.46  
 Lon E 15°16.54  
 start stop duration Purpose : 1  
 TIME :16:58:22 17:29:04 30.7 (min) Region : 5030  
 LOG : 3551.20 3553.02 1.8 Gear cond.: 0  
 FDEPTH: 166 168 Validity : 0  
 BDEPTH: 166 168 Speed : 3.6 km  
 Towing dir: 0° Wire out : 500 m Catch/hour: 666.60  
 Sorted : 267 Total catch: 341.08

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 200  
 DATE :24/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.62  
 Lon E 15°16.50  
 start stop duration Purpose : 1  
 TIME :22:34:17 22:44:25 10.1 (min) Region : 5030  
 LOG : 3569.97 3570.47 0.5 Gear cond.: 0  
 FDEPTH: 140 140 Validity : 0  
 BDEPTH: 165 166 Speed : 3.0 km  
 Towing dir: 0° Wire out : 330 m Catch/hour: 8.56  
 Sorted : 1 Total catch: 1.45

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Chelidonichthys capensis	132.90	286	19.94	1604
Spatangus capensis	130.94	1954	19.64	
Thyrsites atun	110.42	76	16.57	1603
Merluccius capensis	70.36	84	10.55	1610
Merluccius capensis	43.00	250	6.45	1611
Sepia australis	35.18	1814	5.28	
Merluccius capensis	23.45	23	3.52	1609
Merluccius paradoxus	18.76	2693	2.81	1613
Yellow sponges	18.18	0	2.73	
Chelidonichthys queketti	15.64	139	2.35	1605
Helicolenus dactylopterus	14.87	237	2.23	1616
Merluccius paradoxus	9.19	156	1.38	1612
Trachurus capensis	8.07	55	1.21	1615
Zeus capensis	6.33	182	0.95	1617
Holohalaelurus regani	5.86	21	0.88	
Brama brama	3.52	2	0.53	1606
Chelidonichthys queketti	2.83	41	0.43	1618
Heart urchin	2.60	62	0.39	
Raja straeleni	2.54	4	0.38	
Cynoglossus zanzibarensis	2.29	37	0.34	1614
Genypterus capensis	1.76	2	0.26	1608
Starfish - fleshy A	1.34	9	0.20	
Congiopodus spinifer	1.17	10	0.18	
Paracallionymus costatus	1.14	127	0.17	
Todaropsis eblanae	1.06	18	0.16	1619
Todarodes angolezensis	0.98	2	0.15	1607
Torpedo nobiliana	0.78	2	0.12	
Starfish - purple	0.35	86	0.05	
Exodromidia sp.	0.17	4	0.03	
Gastropod nei	0.15	9	0.02	
Starfish yellow/orange	0.15	9	0.02	
Whelks	0.12	4	0.02	
Physiculus capensis	0.11	4	0.02	
Starfish red A	0.11	4	0.02	
Genypterus capensis	0.09	5	0.01	1620
Lolligoncula mercatoris	0.09	41	0.01	
Mursia cristimanus	0.09	4	0.01	
Parapagurus dimorphus	0.03	4	0.00	
Total	666.60		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Sepia australis	3.16	195	36.93	
Merluccius capensis	2.56	18	29.88	1626
Merluccius paradoxus	1.46	77	17.01	1627
Paracallionymus costatus	1.17	1019	13.69	
Inioteuthis capensis	0.08	36	0.90	
J E L Y F I S H	0.07	0	0.83	
Maurollicus muelleri	0.05	53	0.55	
Helicolenus dactylopterus, juvenile	0.02	6	0.21	
Total	8.56		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 201  
 DATE :24/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.78  
 Lon E 15°15.98  
 start stop duration Purpose : 1  
 TIME :22:54:45 23:04:43 10.0 (min) Region : 5030  
 LOG : 3570.93 3571.42 0.5 Gear cond.: 0  
 FDEPTH: 70 70 Validity : 0  
 BDEPTH: 167 166 Speed : 3.0 km  
 Towing dir: 0° Wire out : 170 m Catch/hour: 21.00  
 Sorted : 3 Total catch: 3.49

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Thyrsites atun	8.73	6	41.56	1629
Merluccius paradoxus	7.49	1450	35.68	1628
Sepia australis	4.50	427	21.41	
Helicolenus dactylopterus, juvenile	0.09	66	0.43	
Paracallionymus costatus, juvenile	0.06	30	0.29	
Inioteuthis capensis	0.05	36	0.26	
Lolligoncula mercatoris	0.05	24	0.23	
Maurollicus muelleri	0.02	30	0.09	
Phyllosoma	0.01	54	0.03	
Euphausiacea	0.01	0	0.03	
Total	21.00		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 197  
 DATE :24/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.12  
 Lon E 15°15.85  
 start stop duration Purpose : 1  
 TIME :19:40:31 19:50:38 10.1 (min) Region : 5030  
 LOG : 3559.94 3560.51 0.6 Gear cond.: 0  
 FDEPTH: 140 140 Validity : 0  
 BDEPTH: 166 166 Speed : 3.4 km  
 Towing dir: 0° Wire out : 400 m Catch/hour: 14.15  
 Sorted : 2 Total catch: 2.39

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 202  
 DATE :24/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.07  
 Lon E 15°15.49  
 start stop duration Purpose : 1  
 TIME :23:12:24 23:22:35 10.2 (min) Region : 5030  
 LOG : 3571.76 3572.30 0.5 Gear cond.: 0  
 FDEPTH: 30 30 Validity : 0  
 BDEPTH: 167 169 Speed : 3.2 km  
 Towing dir: 0° Wire out : 80 m Catch/hour: 14.04  
 Sorted : 2 Total catch: 2.38

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	6.70	42	47.36	1621
Merluccius paradoxus	2.13	356	15.09	1623
Chelidonichthys capensis	2.08	6	14.67	
Zeus capensis	1.48	59	10.48	
Paracallionymus costatus	0.89	6	6.29	
Sepia australis	0.38	47	2.69	
Merluccius paradoxus	0.36	6	2.51	1622
Maurollicus muelleri	0.07	65	0.52	
Inioteuthis capensis	0.03	12	0.19	
Lolligoncula mercatoris	0.03	12	0.19	
Total	14.15		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Sepia australis	11.14	1238	79.37	
Merluccius paradoxus	2.36	454	16.80	1630
Lolligoncula mercatoris	0.19	88	1.39	
Euphausiacea	0.15	0	1.09	
Inioteuthis capensis	0.06	47	0.42	
Lepidopus caudatus, juvenile	0.05	35	0.38	
Paracallionymus costatus	0.03	12	0.21	
Phyllosoma	0.02	0	0.13	
Maurollicus muelleri	0.02	41	0.13	
Leptocephalus	0.01	6	0.07	
Helicolenus dactylopterus, juvenile	0.00	12	0.03	
Total	14.04		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 198  
 DATE :24/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.24  
 Lon E 15°15.50  
 start stop duration Purpose : 1  
 TIME :19:58:06 20:07:58 9.9 (min) Region : 5030  
 LOG : 3560.87 3561.42 0.6 Gear cond.: 0  
 FDEPTH: 70 65 Validity : 0  
 BDEPTH: 167 168 Speed : 3.3 km  
 Towing dir: 0° Wire out : 200 m Catch/hour: 11.98  
 Sorted : 2 Total catch: 1.97

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 203  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.72  
 Lon E 15°16.66  
 start stop duration Purpose : 1  
 TIME :01:22:01 01:32:17 10.3 (min) Region : 5030  
 LOG : 3579.02 3579.54 0.5 Gear cond.: 0  
 FDEPTH: 140 140 Validity : 0  
 BDEPTH: 165 167 Speed : 3.0 km  
 Towing dir: 0° Wire out : 330 m Catch/hour: 15.65  
 Sorted : 3 Total catch: 2.68

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Sepia australis	7.29	912	60.90	
Merluccius paradoxus	4.19	851	35.02	1624
Lolligoncula mercatoris	0.21	97	1.75	
Zeus capensis	0.07	12	0.61	
Inioteuthis capensis	0.06	43	0.52	
Helicolenus dactylopterus	0.04	36	0.37	
Paracallionymus costatus	0.04	18	0.33	
Maurollicus muelleri	0.02	49	0.20	
Shrimps, small, non comm.	0.01	6	0.10	
Euphausiacea	0.01	0	0.10	
Phyllosoma	0.01	103	0.09	
Total	11.98		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	4.65	29	29.71	1632
Chelidonichthys capensis	2.86	6	18.29	
Sepia australis	2.47	169	15.79	
Chelidonichthys queketti	1.90	35	12.17	
Merluccius paradoxus	1.54	70	9.85	1631
Paracallionymus costatus	0.83	555	5.30	
Lophius vomerinus	0.65	6	4.18	
J E L Y F I S H	0.61	0	3.88	
Inioteuthis capensis	0.06	35	0.37	
Helicolenus dactylopterus	0.04	18	0.22	
Maurollicus muelleri	0.04	29	0.22	
Total	15.65		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 199  
 DATE :24/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°42.55  
 Lon E 15°15.20  
 start stop duration Purpose : 1  
 TIME :20:12:37 20:22:59 10.4 (min) Region : 5030  
 LOG : 3561.62 3562.23 0.6 Gear cond.: 0  
 FDEPTH: 35 30 Validity : 0  
 BDEPTH: 168 168 Speed : 3.5 km  
 Towing dir: 0° Wire out : 100 m Catch/hour: 51.66  
 Sorted : 9 Total catch: 8.94

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 204  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.95  
 Lon E 15°16.08  
 start stop duration Purpose : 1  
 TIME :01:41:38 01:51:52 10.2 (min) Region : 5030  
 LOG : 3579.95 3580.49 0.5 Gear cond.: 0  
 FDEPTH: 70 70 Validity : 0  
 BDEPTH: 167 167 Speed : 3.2 km  
 Towing dir: 0° Wire out : 180 m Catch/hour: 10.67  
 Sorted : 2 Total catch: 1.82

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Sepia australis	35.61	3358	68.92	
Euphausiacea	12.60	0	24.39	
Merluccius paradoxus	1.60	243	3.10	1625
Zeus capensis	1.17	35	2.26	
Todaropsis eblanae	0.33	6	0.64	
Lolligoncula mercatoris	0.16	69	0.30	
Inioteuthis capensis	0.09	52	0.17	
Paracallionymus costatus	0.05	12	0.09	
Leptocephalus	0.03	17	0.06	
Maurollicus muelleri	0.02	40	0.04	
Lepidopus caudatus	0.02	12	0.03	
Total	51.66		100.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius paradoxus	6.04	1150	56.62	1633
Sepia australis	3.81	5449	35.73	
J E L Y F I S H	0.50	0	4.67	
Inioteuthis capensis	0.12	47	1.15	
Lolligoncula mercatoris	0.11	47	0.99	
Helicolenus dactylopterus, juvenile	0.04	29	0.38	
Paracallionymus costatus	0.03	18	0.27	
Maurollicus muelleri	0.02	29	0.16	
Total	10.67		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 205  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.24  
 start stop duration Purpose : 1  
 TIME :01:58:34 02:08:50 10.3 (min) Region : 5030  
 LOG : 3580.81 3581.39 0.6 Gear cond.: 0  
 FDEPTH: 30 30 Validity : 0  
 BDEPTH: 168 168 Speed : 3.4 km  
 Towing dir: 0° Wire out : 75 m Catch/hour: 27.16  
 Sorted : 5 Total catch: 4.65

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Sepia australis	24.13 1420	88.84	
Merluccius paradoxus	1.35 275	4.97	1634
Aequorea forskalea	0.62 6	2.28	
Euphausiacea	0.55 13729	2.02	
Lolligoncula mercatoris	0.26 117	0.97	
Inioteuthis capensis	0.21 111	0.77	
Leptocephalus	0.02 12	0.06	
Maurollicus muelleri	0.01 18	0.04	
Helicolenus dactylopterus, juvenile	0.01 6	0.04	
Total	27.16	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 206  
 DATE :25/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 28°43.78  
 start stop duration Purpose : 1  
 TIME :02:46:54 02:57:23 10.5 (min) Region : 5030  
 LOG : 3584.04 3584.58 0.5 Gear cond.: 0  
 FDEPTH: 168 167 Validity : 0  
 BDEPTH: 168 167 Speed : 3.1 km  
 Towing dir: 0° Wire out : 415 m Catch/hour: 252.78  
 Sorted : 44 Total catch: 44.15

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Yellow sponges	87.02 0	34.43	
Merluccius capensis	44.20 137	17.49	1636
Spatangus capensis	25.19 212	9.97	
Raja straeleni	24.62 11	9.74	
Genypterus capensis	12.25 34	4.85	1635
Holohalaelurus regani	11.45 46	4.53	
Zeus capensis	6.81 137	2.70	1637
Solenocera sp.	4.92 595	1.95	
Sepia australis	4.75 263	1.88	
Merluccius paradoxus	4.58 80	1.81	1645
Chelidonichthys capensis	4.29 11	1.70	1641
Helicolenus dactylopterus	3.32 52	1.31	1638
Todarodes angolensis	3.32 6	1.31	1639
Heart urchin	2.74 69	1.08	
Paracallionymus costatus	2.56 916	1.01	
Merluccius paradoxus	1.95 384	0.77	1644
SALPS	1.84 0	0.73	
Chelidonichthys queketti	1.37 11	0.54	1642
Cynoglossus zanzibarensis	1.37 17	0.54	1643
Gnathopis capensis	1.26 29	0.50	
Starfish - purple	0.70 143	0.28	
Myxine capensis	0.69 6	0.27	
Trachurus capensis	0.63 6	0.25	1640
Lepidopus caudatus	0.34 6	0.14	
Mursia cristimanus	0.18 6	0.07	
Starfish - twinkle	0.17 6	0.07	
Pterygosquilla armata capensis	0.15 29	0.06	
Exodromidia sp.	0.05 6	0.02	
Maurollicus muelleri	0.02 11	0.01	
Inioteuthis capensis	0.01 6	0.00	
Sepia typica	0.01 6	0.00	
Total	252.78	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 207  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°45.00  
 start stop duration Purpose : 1  
 TIME :04:20:27 04:30:31 10.1 (min) Region : 5030  
 LOG : 3587.94 3588.51 0.6 Gear cond.: 0  
 FDEPTH: 140 140 Validity : 0  
 BDEPTH: 165 166 Speed : 3.4 km  
 Towing dir: 0° Wire out : 400 m Catch/hour: 8.56  
 Sorted : 1 Total catch: 1.44

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Sepia australis	4.77 596	55.66	1646
Chelidonichthys capensis	3.10 6	36.18	1646
Merluccius paradoxus	0.26 60	3.03	1647
Inioteuthis capensis	0.23 0	2.66	
Lolligoncula mercatoris	0.21 0	2.47	
Total	8.56	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 208  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.11  
 start stop duration Purpose : 1  
 TIME :04:40:56 04:50:41 9.8 (min) Region : 5030  
 LOG : 3588.97 3589.55 0.6 Gear cond.: 0  
 FDEPTH: 75 70 Validity : 0  
 BDEPTH: 167 167 Speed : 3.5 km  
 Towing dir: 0° Wire out : 200 m Catch/hour: 5.26  
 Sorted : 1 Total catch: 0.85

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Chelidonichthys capensis	4.98 12	94.80	1648
Sepia australis	0.23 12	4.35	
Helicolenus dactylopterus	0.04 25	0.84	1649
Euphausiacea	0.00 0	0.00	
Maurollicus muelleri	0.00 0	0.00	
Total	5.26	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 209  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.21  
 start stop duration Purpose : 1  
 TIME :04:58:53 05:08:44 9.9 (min) Region : 5030  
 LOG : 3590.01 3590.58 0.6 Gear cond.: 0  
 FDEPTH: 30 30 Validity : 0  
 BDEPTH: 167 168 Speed : 3.5 km  
 Towing dir: 0° Wire out : 100 m Catch/hour: 0.16  
 Sorted : 0 Total catch: 0.03

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Sepia australis	0.16 12	0.00	
Maurollicus muelleri	0.00 0	0.00	
Total	0.16	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 210  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.88  
 start stop duration Purpose : 1  
 TIME :07:15:13 07:25:30 10.3 (min) Region : 5030  
 LOG : 3597.56 3598.13 0.6 Gear cond.: 0  
 FDEPTH: 137 143

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Leptocephalus	0.01 6	0.00	
Gnathopis capensis	0.09 6	0.00	
Total	0.10	0.00	

BDEPTH: 165 165 Validity : 0  
 Towing dir: 0° Wire out : 400 m Speed : 3.4 km  
 Sorted : 1 Total catch: 0.75 Catch/hour: 4.38

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Chelidonichthys capensis	3.44 6	78.69	1650
J E L Y F I S H	0.49 0	11.11	
Etrumeus whiteheadi	0.33 6	7.46	
Lolligoncula mercatoris	0.05 29	1.15	
Maurollicus muelleri	0.04 47	0.80	
Sepia australis	0.03 47	0.72	
Euphausiacea	0.00 0	0.08	
Total	4.38	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 211  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.10  
 start stop duration Purpose : 1  
 TIME :07:34:53 07:45:16 10.4 (min) Region : 5030  
 LOG : 3598.57 3599.16 0.6 Gear cond.: 0  
 FDEPTH: 80 60 Validity : 0  
 BDEPTH: 166 167 Speed : 3.4 km  
 Towing dir: 0° Wire out : 192 m Catch/hour: 0.10  
 Sorted : 0 Total catch: 0.02

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Sepia australis	0.10 12	0.00	
Maurollicus muelleri	0.00 0	0.00	
Total	0.10	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 212  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.33  
 start stop duration Purpose : 1  
 TIME :07:52:15 08:02:53 10.6 (min) Region : 5030  
 LOG : 3599.53 3600.17 0.6 Gear cond.: 0  
 FDEPTH: 33 35 Validity : 0  
 BDEPTH: 167 167 Speed : 3.6 km  
 Towing dir: 0° Wire out : 120 m Catch/hour: 7.56  
 Sorted : 1 Total catch: 1.34

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
SALPS	7.44 0	98.46	
Sepia australis	0.12 0	1.54	
Total	7.56	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 213  
 DATE :25/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 28°44.14  
 start stop duration Purpose : 1  
 TIME :08:45:11 08:55:41 10.5 (min) Region : 5030  
 LOG : 3602.70 3603.21 0.5 Gear cond.: 0  
 FDEPTH: 165 165 Validity : 0  
 BDEPTH: 165 165 Speed : 2.9 km  
 Towing dir: 0° Wire out : 445 m Catch/hour: 720.53  
 Sorted : 126 Total catch: 126.09

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Chelidonichthys capensis	165.71 411	23.00	1651
Spatangus capensis	131.43 1274	18.24	
Yellow sponges	114.29 286	15.86	
Merluccius capensis	80.00 474	11.10	1655
Merluccius paradoxus	68.34 69	9.49	1663
Chelidonichthys queketti	22.86 200	3.17	1653
Merluccius paradoxus	17.14 154	2.38	1656
Merluccius capensis	15.46 29	2.28	1654
Holohalaelurus regani	14.74 51	2.05	
Sepia australis	13.94 697	1.94	
Zeus capensis	12.34 366	1.71	1660
J E L Y F I S H	11.31 6	1.57	
Heart urchin	11.09 383	1.54	
Thyrsites atun	9.37 6	1.30	1652
Trachurus capensis	8.23 63	1.14	1657
Todaropsis eblanae	5.89 97	0.82	1658
Congiopodus spinifer	4.23 29	0.59	
Merluccius paradoxus	3.37 434	0.47	1661
Paracallionymus costatus	2.51 503	0.35	
Starfish - fleshy A	1.77 11	0.25	
Lepidopus caudatus	1.71 57	0.24	
Lolligoncula mercatoris	0.86 343	0.12	
Helicolenus dactylopterus	0.74 29	0.10	1659
Whelks	0.63 6	0.09	
Macropipus australis	0.51 11	0.07	
Etrumeus whiteheadi	0.29 6	0.04	
Notopogon macrosolen	0.25 6	0.03	
Starfish - purple	0.14 40	0.02	
Gastropod nei	0.11 6	0.02	
Cynoglossus zanzibarensis	0.11 6	0.02	1662
Hermits, mixed*	0.08 6	0.01	
Solenocera sp.	0.04 6	0.01	
Inioteuthis capensis	0.01 6	0.00	
Total	720.53	100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 214  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.99  
 start stop duration Purpose : 1  
 TIME :10:19:39 10:29:46 10.1 (min) Region : 5030  
 LOG : 3606.40 3606.95 0.6 Gear cond.: 0  
 FDEPTH: 140 140 Validity : 0  
 BDEPTH: 164 165 Speed : 3.3 km  
 Towing dir: 0° Wire out : 330 m Catch/hour: 0.06  
 Sorted : 0 Total catch: 0.01

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Euphausiacea	0.00 0	0.00	
J E L Y F I S H	0.05 0	0.00	
Sepia australis	0.01 12	0.00	
Maurollicus muelleri	0.00 0	0.00	
Total	0.06	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 215  
 DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.15  
 start stop duration Purpose : 1  
 TIME :10:39:15 10:49:09 9.9 (min) Region : 5030  
 LOG : 3607.39 3607.89 0.5 Gear cond.: 0  
 FDEPTH: 70 70 Validity : 0  
 BDEPTH: 166 166 Speed : 3.0 km  
 Towing dir: 0° Wire out : 180 m Catch/hour: 0.10  
 Sorted : 0 Total catch: 0.02

SPECIES	CATCH/HOUR	% OF TOT. C	SAMP
	weight numbers		
Leptocephalus	0.01 6	0.00	
Gnathopis capensis	0.09 6	0.00	
Total	0.10	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 216  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.50  
start stop duration Purpose : 1  
LOG : 10:54:58 11:05:14 10.3 (min) Region : 5030  
FDEPTH: 30 25 Gear cond.: 0  
BDEPTH: 168 167 Validity : 0  
Towing dir: 0° Wire out : 75 m Speed : 3.0 kn  
Sorted : 0 Total catch: 0.00 Catch/hour: 0.00  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
N O C A T C H 0.00 0 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 217  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.78  
start stop duration Purpose : 1  
LOG : 13:10:02 13:20:12 10.2 (min) Region : 5030  
FDEPTH: 136 139 Gear cond.: 0  
BDEPTH: 165 166 Validity : 0  
Towing dir: 0° Wire out : 390 m Speed : 3.4 kn  
Sorted : 0 Total catch: 0.03 Catch/hour: 0.18  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Leptocephalus 0.01 6 0.00  
Euphausiacea 0.00 0 0.00  
J E L L Y F I S H 0.15 0 0.00  
Maurollicus muelleri 0.02 0 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 218  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.97  
start stop duration Purpose : 1  
LOG : 13:29:13 13:39:09 9.9 (min) Region : 5030  
FDEPTH: 90 78 Gear cond.: 0  
BDEPTH: 168 167 Validity : 0  
Towing dir: 0° Wire out : 190 m Speed : 3.1 kn  
Sorted : 0 Total catch: 0.03 Catch/hour: 0.16  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
J E L L Y F I S H 0.16 0 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 219  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.28  
start stop duration Purpose : 1  
LOG : 13:45:14 13:55:01 9.8 (min) Region : 5030  
FDEPTH: 30 31 Gear cond.: 0  
BDEPTH: 167 169 Validity : 0  
Towing dir: 0° Wire out : 100 m Speed : 3.1 kn  
Sorted : 0 Total catch: 0.00 Catch/hour: 0.00  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
N O C A T C H 0.00 0 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 220  
DATE :25/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 28°43.54  
start stop duration Purpose : 1  
LOG : 14:31:01 14:33:47 2.8 (min) Region : 5030  
FDEPTH: 167 168 Gear cond.: 9  
BDEPTH: 167 168 Validity : 9  
Towing dir: 0° Wire out : 0 m Speed : 2.6 kn  
Sorted : 0 Total catch: 0.00 Catch/hour: 0.00  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 221  
DATE :25/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 28°44.46  
start stop duration Purpose : 1  
LOG : 15:29:28 15:39:36 10.1 (min) Region : 5030  
FDEPTH: 167 166 Gear cond.: 0  
BDEPTH: 167 166 Validity : 0  
Towing dir: 0° Wire out : 420 m Speed : 3.1 kn  
Sorted : 106 Total catch: 106.17 Catch/hour: 628.85  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Spatangus capensis 177.69 2221 28.26  
Merluccius capensis 177.69 758 28.26 1669  
Sponges - yellow 100.69 0 16.01  
Chelidonichthys capensis 97.73 237 15.54 1667  
Sepia australis 18.12 1072 2.88  
Brama brama 11.85 12 1.88 1664  
Zeus capensis 7.70 213 1.22 1666  
Chelidonichthys queketti 7.70 65 1.22 1665  
Holohalaelurus regani 4.86 12 0.77  
Congiopodus spinifer 4.74 30 0.75  
Merluccius paradoxus 3.79 30 0.60 1672  
Helicolenus dactylopterus 3.55 41 0.57 1671  
Merluccius paradoxus 3.14 426 0.50 1670  
J E L L Y F I S H 1.85 6 0.29  
Paracallionymus costatus 1.24 255 0.20  
Cynoglossus zanzibarensis 1.01 12 0.16 1673  
Heart urchin 0.99 53 0.16  
Lepidopus caudatus 0.82 18 0.13  
Genypteris capensis 0.77 6 0.12 1668  
Etrumeus whiteheadi 0.69 12 0.11  
Wheks 0.56 6 0.09  
Starfish - fleshy A 0.55 6 0.09  
Lolligoncula mercatoris 0.41 166 0.06  
Exodromidia sp. 0.24 6 0.04  
Starfish - purple 0.19 41 0.03  
Starfish yellow/orange 0.15 6 0.02  
Parapagurus dimorphus 0.12 24 0.02  
Total 628.85 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 222  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.62  
start stop duration Purpose : 1  
LOG : 16:46:13 16:56:04 9.9 (min) Region : 5030  
FDEPTH: 140 135 Gear cond.: 0  
BDEPTH: 165 167 Validity : 0  
Towing dir: 0° Wire out : 400 m Speed : 3.5 kn  
Sorted : 1 Total catch: 0.73 Catch/hour: 4.44  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Maurollicus muelleri 4.44 8227 100.00  
Total 4.44 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 223  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.61  
start stop duration Purpose : 1  
LOG : 17:07:40 17:17:41 10.0 (min) Region : 5030  
FDEPTH: 65 70 Gear cond.: 0

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 224  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°42.73  
start stop duration Purpose : 1  
LOG : 17:27:18 17:37:13 9.9 (min) Region : 5030  
FDEPTH: 30 32 Gear cond.: 0  
BDEPTH: 168 169 Validity : 0  
Towing dir: 0° Wire out : 100 m Speed : 3.6 kn  
Sorted : 0 Total catch: 0.00 Catch/hour: 0.01  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Maurollicus muelleri 0.01 18 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 225  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°45.20  
start stop duration Purpose : 1  
LOG : 19:25:46 19:35:33 9.8 (min) Region : 5030  
FDEPTH: 140 138 Gear cond.: 0  
BDEPTH: 164 165 Validity : 0  
Towing dir: 0° Wire out : 400 m Speed : 3.5 kn  
Sorted : 9 Total catch: 8.95 Catch/hour: 54.93  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Sepia australis 46.01 25 63.76  
Merluccius capensis 3.74 18 8.81 1676  
Merluccius paradoxus 1.60 18 2.90 1675  
Zeus capensis 1.47 55 2.68  
Maurollicus muelleri 0.98 1423 1.79  
Paracallionymus costatus 0.60 307 1.08  
Solenocera sp. 0.25 43 0.45  
Merluccius paradoxus 0.20 31 0.36 1677  
Inioteuthis capensis 0.07 31 0.13  
J E L L Y F I S H 0.02 0 0.03  
Total 54.93 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 226  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.28  
start stop duration Purpose : 1  
LOG : 19:45:14 19:55:06 9.9 (min) Region : 5030  
FDEPTH: 70 70 Gear cond.: 0  
BDEPTH: 165 166 Validity : 0  
Towing dir: 0° Wire out : 200 m Speed : 3.2 kn  
Sorted : 1 Total catch: 0.88 Catch/hour: 5.36  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Merluccius paradoxus 2.54 402 47.49 1680  
Sepia australis 1.14 79 21.25  
SALPS 0.79 12 14.77  
Sepia australis 0.38 292 7.04 0  
Zeus capensis 0.27 18 5.11 1679  
Inioteuthis capensis 0.12 67 2.27  
Paracallionymus costatus 0.04 30 0.80  
Sufflogobius bibarbatatus 0.02 6 0.34  
Lolligoncula mercatoris 0.01 6 0.23  
Helicolenus dactylopterus 0.01 6 0.23  
P O L Y C H A E T A 0.01 12 0.23  
Maurollicus muelleri 0.01 24 0.23  
Euphausiacea 0.00 12 0.02  
Total 5.36 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 227  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.55  
start stop duration Purpose : 1  
LOG : 20:00:52 20:12:07 11.3 (min) Region : 5030  
FDEPTH: 35 30 Gear cond.: 0  
BDEPTH: 166 167 Validity : 0  
Towing dir: 0° Wire out : 100 m Speed : 3.6 kn  
Sorted : 17 Total catch: 16.70 Catch/hour: 89.06  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Ranzania laevis 62.40 91 70.07  
Sepia australis 23.36 0 26.23  
Lolligoncula mercatoris 1.17 59 1.32  
Merluccius paradoxus 1.07 197 1.20 1681  
Euphausiacea 0.37 0 0.42  
Zeus capensis 0.35 11 0.40  
Lepidopus caudatus 0.24 32 0.27  
Leptocephalus 0.03 21 0.04  
Paracallionymus costatus 0.02 11 0.02  
Maurollicus muelleri 0.02 21 0.02  
Inioteuthis capensis 0.01 5 0.01  
Lycoteuthis lorigera 0.01 27 0.01  
Total 89.06 100.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 228  
DATE :25/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.86  
start stop duration Purpose : 1  
LOG : 22:20:50 22:31:04 10.2 (min) Region : 5030  
FDEPTH: 140 140 Gear cond.: 0  
BDEPTH: 164 165 Validity : 0  
Towing dir: 0° Wire out : 330 m Speed : 3.1 kn  
Sorted : 3 Total catch: 2.67 Catch/hour: 15.65  
SPECIES CATCH/HOUR % OF TOT. C SAMP  
weight numbers  
Lepidopus caudatus 5.22 6 33.36  
Merluccius capensis 3.11 18 19.87 1682  
Aegurorea forskalea 2.99 6 19.12  
Sepia australis 1.47 100 9.37  
Lophius vomerinus 1.00 6 6.37  
Merluccius paradoxus 0.82 35 5.25 1683  
Paracallionymus costatus 0.76 1894 4.84  
Inioteuthis capensis 0.10 41 0.64  
Zeus capensis 0.08 6 0.52  
Maurollicus muelleri 0.04 53 0.22  
Genypteris capensis 0.03 6 0.19  
Sufflogobius bibarbatatus 0.02 6 0.15  
Solenocera sp. 0.02 6 0.11  
Total 15.65 100.00

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 229	
DATE	: 25/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°44.08
TIME	: 22:39:15 22:49:13	start stop duration		Lon	E 15°16.04
LOG	: 3644.27 3644.80	0.5	Purpose	: 1	Region
FDEPTH:	70	70	Gear cond.:	0	5030
BDEPTH:	166	166	Validity:	0	
Towing dir:	0°	Wire out : 180 m	Speed	: 3.2 km	
Sorted	: 2	Total catch: 1.88	Catch/hour:	11.33	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Sepia australis	3.51	277	31.01		
Merluccius paradoxus	3.21	620	28.36	1685	
SALPS	2.72	0	24.00		
SALPS	0.79	12	6.96	0	
Merluccius paradoxus	0.67	12	5.89	1684	
Sepia australis	0.16	150	1.43	0	
Iniotheuthis capensis	0.10	54	0.90		
Lolligoncula mercatoris	0.07	30	0.58		
Paracallionymus costatus	0.04	24	0.37		
Helicolenus dactylopterus	0.02	12	0.21		
Euphausiacea	0.01	0	0.11		
Maurollicus muelleri	0.01	12	0.11		
Phyllosoma	0.01	36	0.05		
Total	11.33		100.00		

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 230	
DATE	: 25/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°43.34
TIME	: 22:56:02 23:06:15	start stop duration		Lon	E 15°15.54
LOG	: 3645.12 3645.71	10.2 (min)	Purpose	: 1	Region
FDEPTH:	30	30	Gear cond.:	0	5030
BDEPTH:	166	167	Validity:	0	
Towing dir:	0°	Wire out : 75 m	Speed	: 3.4 km	
Sorted	: 1	Total catch: 1.23	Catch/hour:	7.22	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Sepia australis	4.77	217	66.04	0	
Euphausiacea	1.17	0	16.18		
Sepia australis	0.70	581	9.68		
Lolligoncula mercatoris	0.28	123	3.82		
Merluccius paradoxus	0.18	53	2.52	1686	
Iniotheuthis capensis	0.06	47	0.89		
Leptocephalus	0.03	18	0.41		
Lepidopus caudatus	0.03	23	0.41		
Lycoteuthis lorigera	0.00	6	0.05		
Total	7.22		100.00		

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 231	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°44.51
TIME	: 01:23:17 01:33:04	start stop duration		Lon	E 15°16.44
LOG	: 3651.92 3652.44	9.8 (min)	Purpose	: 1	Region
FDEPTH:	140	140	Gear cond.:	0	5030
BDEPTH:	166	167	Validity:	0	
Towing dir:	0°	Wire out : 330 m	Speed	: 3.2 km	
Sorted	: 0	Total catch: 0.05	Catch/hour:	0.31	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Paracallionymus costatus	0.10	55	0.00		
Euphausiacea	0.00	6	0.00		
Sepia australis	0.13	6	0.00		
Sepia australis	0.01	12	0.00	0	
Zeus capensis	0.06	6	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 232	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°43.82
TIME	: 01:39:44 01:49:39	start stop duration		Lon	E 15°15.93
LOG	: 3652.73 3653.26	0.5	Purpose	: 1	Region
FDEPTH:	70	70	Gear cond.:	0	5030
BDEPTH:	167	167	Validity:	0	
Towing dir:	0°	Wire out : 180 m	Speed	: 3.2 km	
Sorted	: 0	Total catch: 0.08	Catch/hour:	0.45	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Paracallionymus costatus	0.00	6	0.00		
Euphausiacea	0.00	30	0.00		
ISOPODS	0.00	6	0.00		
Merluccius paradoxus	0.41	103	0.00	1687	
Sepia australis	0.03	18	0.00		
Iniotheuthis capensis	0.01	6	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 233	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°43.12
TIME	: 01:56:10 02:04:45	start stop duration		Lon	E 15°15.41
LOG	: 3653.57 3654.07	8.6 (min)	Purpose	: 1	Region
FDEPTH:	30	30	Gear cond.:	0	5030
BDEPTH:	167	168	Validity:	0	
Towing dir:	0°	Wire out : 75 m	Speed	: 3.5 km	
Sorted	: 1	Total catch: 0.88	Catch/hour:	6.16	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Sepia australis	6.08	35	98.75		
Iniotheuthis capensis	0.03	14	0.45		
Euphausiacea	0.02	0	0.34		
Merluccius paradoxus	0.01	7	0.23	1688	
Sepia australis	0.01	21	0.23	0	
Total	6.16		100.00		

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 234	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	6	POSITION: Lat	S 28°43.81
TIME	: 02:45:50 02:56:11	start stop duration		Lon	E 15°15.91
LOG	: 3656.84 3657.35	10.4 (min)	Purpose	: 1	Region
FDEPTH:	167	167	Gear cond.:	0	5030
BDEPTH:	167	167	Validity:	0	
Towing dir:	0°	Wire out : 420 m	Speed	: 2.9 km	
Sorted	: 42	Total catch: 42.05	Catch/hour:	243.27	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Sponges - yellow	69.43	0	28.54		
Merluccius capensis	52.07	203	21.41	1691	
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 235	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°44.82
TIME	: 04:22:11 04:32:13	start stop duration		Lon	E 15°16.50
LOG	: 3660.68 3661.27	10.0 (min)	Purpose	: 1	Region
FDEPTH:	142	138	Gear cond.:	0	5030
BDEPTH:	166	166	Validity:	0	
Towing dir:	0°	Wire out : 400 m	Speed	: 3.5 km	
Sorted	: 0	Total catch: 0.00	Catch/hour:	0.01	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Euphausiacea	0.01	6	0.00		
Sepia australis	0.01	6	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 236	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°43.92
TIME	: 04:41:45 04:51:46	start stop duration		Lon	E 15°15.88
LOG	: 3661.72 3662.29	10.0 (min)	Purpose	: 1	Region
FDEPTH:	70	73	Gear cond.:	0	5030
BDEPTH:	167	167	Validity:	0	
Towing dir:	0°	Wire out : 200 m	Speed	: 3.4 km	
Sorted	: 0	Total catch: 0.00	Catch/hour:	0.01	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Sepia australis	0.01	6	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 237	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°43.11
TIME	: 04:59:07 05:09:08	start stop duration		Lon	E 15°15.32
LOG	: 3662.66 3663.28	10.0 (min)	Purpose	: 1	Region
FDEPTH:	33	31	Gear cond.:	0	5030
BDEPTH:	168	168	Validity:	0	
Towing dir:	0°	Wire out : 100 m	Speed	: 3.7 km	
Sorted	: 0	Total catch: 0.02	Catch/hour:	0.10	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
Sepia australis	0.09	6	0.00		
Iniotheuthis capensis	0.00	6	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 238	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°45.05
TIME	: 07:25:47 07:36:16	start stop duration		Lon	E 15°15.95
LOG	: 3669.98 3670.57	10.5 (min)	Purpose	: 1	Region
FDEPTH:	135	143	Gear cond.:	0	5030
BDEPTH:	165	165	Validity:	0	
Towing dir:	0°	Wire out : 400 m	Speed	: 3.4 km	
Sorted	: 0	Total catch: 0.00	Catch/hour:	0.00	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
N O C A T C H	0.00	0	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 239	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°44.21
TIME	: 07:45:20 07:55:27	start stop duration		Lon	E 15°15.28
LOG	: 3670.99 3671.55	10.1 (min)	Purpose	: 1	Region
FDEPTH:	78	66	Gear cond.:	0	5030
BDEPTH:	167	167	Validity:	0	
Towing dir:	0°	Wire out : 200 m	Speed	: 3.3 km	
Sorted	: 0	Total catch: 0.00	Catch/hour:	0.00	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
N O C A T C H	0.00	0	0.00		
Total					

R/V Dr. Fridtjof Nansen		SURVEY:2012401		STATION: 240	
DATE	: 26/02/2012	GEAR TYPE: PT NO:	1	POSITION: Lat	S 28°43.51
TIME	: 08:01:01 08:11:02	start stop duration		Lon	E 15°14.76
LOG	: 3671.82 3672.40	10.0 (min)	Purpose	: 1	Region
FDEPTH:	34	27	Gear cond.:	0	5030
BDEPTH:	167	168	Validity:	0	
Towing dir:	0°	Wire out : 90 m	Speed	: 3.5 km	
Sorted	: 0	Total catch: 0.00	Catch/hour:	0.00	
SPECIES					
	CATCH/HOUR	% OF TOT. C	SAMP		
weight	numbers				
N O C A T C H	0.00	0	0.00		
Total					



R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 241  
 DATE :26/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 28°43.76  
 start stop duration Purpose : 1  
 TIME :08:48:12 08:58:59 10.8 (min) Region : 5030  
 LOG : 3674.34 3674.89 0.6 Gear cond.: 0  
 FDEPTH: 167 166 Validity : 0  
 BDEPTH: 167 166 Speed : 3.1 km  
 Towing dir: 0° Wire out : 440 m Catch/hour: 805.03  
 Sorted : 145 Total catch: 144.64

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 247  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.68  
 start stop duration Purpose : 1  
 TIME :13:55:28 14:05:24 9.9 (min) Region : 5030  
 LOG : 3688.98 3689.54 0.6 Gear cond.: 0  
 FDEPTH: 27 28 Validity : 0  
 BDEPTH: 168 168 Speed : 3.4 km  
 Towing dir: 0° Wire out : 75 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Merluccius capensis	161.41	957	20.05	1706
Spatangus capensis	139.15	929	17.28	
Chelidonichthys capensis	105.75	273	13.14	1701
Sponges - yellow	94.62	0	11.75	
Merluccius capensis	82.37	83	10.23	1704
Merluccius capensis	69.57	50	8.64	1703
Raja straeleni	21.71	11	2.70	
Callorhynchus capensis	21.71	11	2.70	
Chelidonichthys queketti	16.14	156	2.01	1702
Paracallionymus costatus	14.47	2410	1.80	
Zeus capensis	13.36	401	1.66	1707
Holohalaelurus regani	12.24	33	1.52	
Congiopodus spinifer	11.13	56	1.38	
Sepia australis	10.58	963	1.31	
Heart urchin	7.79	323	0.97	
Cynoglossus zanzibarensis	4.84	72	0.60	1709
Merluccius paradoxus	3.90	579	0.48	1714
Trachurus capensis	3.73	28	0.46	1715
Lepidopus caudatus	1.56	39	0.19	
Emmelichthys nitidus	1.22	61	0.15	
Merluccius paradoxus	1.17	11	0.15	1705
Etrumeus whiteheadi	1.06	17	0.13	
Todaropsis eblanae	0.95	22	0.12	1711
Starfish - purple	0.95	239	0.12	
Gerypteris capensis	0.89	6	0.11	1710
Helicolenus dactylopterus	0.67	11	0.08	1712
Lolligoncula mercatoris	0.64	278	0.08	
Chelidonichthys queketti	0.61	11	0.08	1713
Solenocera sp.	0.56	83	0.07	
Starfish red A	0.14	6	0.02	
Macropisus australis	0.08	6	0.01	
Pterygosquilla armata capensis	0.07	11	0.01	
Total	805.03		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 248  
 DATE :26/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 28°44.03  
 start stop duration Purpose : 1  
 TIME :14:36:50 14:46:57 10.1 (min) Region : 5030  
 LOG : 3691.38 3691.85 0.5 Gear cond.: 0  
 FDEPTH: 168 166 Validity : 0  
 BDEPTH: 168 166 Speed : 2.8 km  
 Towing dir: 0° Wire out : 440 m Catch/hour: 740.86  
 Sorted : 125 Total catch: 124.96

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 249  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°45.26  
 start stop duration Purpose : 1  
 TIME :10:19:18 10:29:31 10.2 (min) Region : 5030  
 LOG : 3678.89 3679.44 0.6 Gear cond.: 0  
 FDEPTH: 140 140 Validity : 0  
 BDEPTH: 163 164 Speed : 3.2 km  
 Towing dir: 0° Wire out : 330 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Euphausiacea	0.00	0	0.00	
Sepia australis	0.00	6	0.00	
Total	0.00	6	0.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Merluccius capensis	154.15	919	20.81	1721
Chelidonichthys capensis	148.22	403	20.01	1716
Spatangus capensis	130.43	1500	17.61	
Sponges - yellow	112.65	0	15.20	
Merluccius capensis	62.25	47	8.40	1719
Brama brama	24.31	12	3.28	1720
Raja straeleni	23.72	12	3.20	
Sepia australis	17.79	1269	2.40	
Merluccius capensis	14.23	24	1.92	1718
Chelidonichthys queketti	11.98	113	1.62	1717
Zeus capensis	10.32	391	1.39	1725
Holohalaelurus regani	5.93	18	0.80	
Merluccius paradoxus	4.15	611	0.56	1723
Merluccius paradoxus	3.74	42	0.50	1726
Helicolenus dactylopterus	2.96	47	0.40	1722
J E L L Y F I S H	2.55	6	0.34	
Paracallionymus costatus	2.02	338	0.27	
Lepidopus caudatus	1.84	42	0.25	
Congiopodus spinifer	1.66	6	0.22	
Heart urchin	1.30	42	0.18	
Todaropsis eblanae	1.19	24	0.16	1724
Lolligoncula mercatoris	1.19	593	0.16	
Macropisus australis	0.83	24	0.11	
Starfish - fleshy	0.39	6	0.05	
Cynoglossus zanzibarensis	0.32	6	0.04	1727
Etrumeus whiteheadi	0.31	6	0.04	
Starfish red A	0.15	6	0.02	
Emmelichthys nitidus	0.10	6	0.01	
Nudibranchs	0.09	6	0.01	
Starfish - purple	0.09	30	0.01	
Pterygosquilla armata capensis	0.02	6	0.00	
Plastic bags	0.00	30	0.00	
Metal waste	0.00	12	0.00	
Total	740.86		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 243  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.47  
 start stop duration Purpose : 1  
 TIME :10:37:08 10:47:28 10.3 (min) Region : 5030  
 LOG : 3679.78 3680.35 0.6 Gear cond.: 0  
 FDEPTH: 70 70 Validity : 0  
 BDEPTH: 165 166 Speed : 3.3 km  
 Towing dir: 0° Wire out : 180 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 250  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.95  
 start stop duration Purpose : 1  
 TIME :16:17:31 16:27:28 9.9 (min) Region : 5030  
 LOG : 3694.67 3696.48 1.8 Gear cond.: 0  
 FDEPTH: 143 140 Validity : 0  
 BDEPTH: 163 166 Speed : 10.9 km  
 Towing dir: 0° Wire out : 380 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Total	0.00	0	0.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Sepia australis	0.00	6	0.00	
Total	0.00	6	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 244  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.62  
 start stop duration Purpose : 1  
 TIME :10:55:29 11:05:25 9.9 (min) Region : 5030  
 LOG : 3680.73 3681.24 0.5 Gear cond.: 0  
 FDEPTH: 30 30 Validity : 0  
 BDEPTH: 166 167 Speed : 3.1 km  
 Towing dir: 0° Wire out : 75 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 251  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°43.24  
 start stop duration Purpose : 1  
 TIME :16:51:48 17:01:50 10.0 (min) Region : 5030  
 LOG : 3697.74 3698.36 0.6 Gear cond.: 0  
 FDEPTH: 74 68 Validity : 0  
 BDEPTH: 168 169 Speed : 3.7 km  
 Towing dir: 0° Wire out : 200 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Total	0.00	0	0.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Sepia australis	0.00	6	0.00	
Total	0.00	6	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 245  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°45.21  
 start stop duration Purpose : 1  
 TIME :13:17:08 13:27:11 10.1 (min) Region : 5030  
 LOG : 3686.93 3687.48 0.6 Gear cond.: 0  
 FDEPTH: 135 142 Validity : 0  
 BDEPTH: 164 165 Speed : 3.3 km  
 Towing dir: 0° Wire out : 390 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 252  
 DATE :27/02/2012 GEAR TYPE: PT NO: 6 POSITION:Lat S 26°48.61  
 start stop duration Purpose : 1  
 TIME :04:35:36 04:56:42 21.1 (min) Region : 5030  
 LOG : 3814.28 3815.42 1.1 Gear cond.: 0  
 FDEPTH: 162 161 Validity : 0  
 BDEPTH: 162 161 Speed : 3.2 km  
 Towing dir: 0° Wire out : 500 m Catch/hour: 5772.51  
 Sorted : 2030 Total catch: 2030.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Total	0.00	0	0.00	

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
N O C A T C H	0.00	0	0.00	
Chrysaora sp.	5687.20	0	98.52	
Sufflogobius bibarbatatus	85.31	0	1.48	
Total	5772.51		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 246  
 DATE :26/02/2012 GEAR TYPE: PT NO: 1 POSITION:Lat S 28°44.41  
 start stop duration Purpose : 1  
 TIME :13:38:08 13:48:14 10.1 (min) Region : 5030  
 LOG : 3688.03 3688.62 0.6 Gear cond.: 0  
 FDEPTH: 70 70 Validity : 0  
 BDEPTH: 166 168 Speed : 3.5 km  
 Towing dir: 0° Wire out : 190 m Catch/hour: 0.00  
 Sorted : 0 Total catch: 0.00

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Sepia australis	0.00	6	0.00	
Total	0.00	6	0.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 253  
 DATE :27/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 26°48.00  
 start stop duration Lon E 14°53.27  
 TIME :06:27:58 06:43:19 15.4 (min) Purpose : 1  
 LOG : 3820.16 3820.91 0.8 Region : 5030  
 FDEPTH: 161 161 Gear cond.: 0  
 BDEPTH: 161 161 Validity : 0  
 Towing dir: 0° Wire out : 500 m Speed : 2.9 kn  
 Sorted :1120 Total catch: 1120.00 Catch/hour: 4377.85

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
Chrysacra sp.	3908.79	0	89.29	
Sufflogobius bibarbatius	469.06	0	10.71	
Total	4377.85		100.00	

R/V Dr. Fridtjof Nansen SURVEY:2012401 STATION: 254  
 DATE :28/02/2012 GEAR TYPE: BT NO: 6 POSITION:Lat S 22°48.86  
 start stop duration Lon E 14°20.67  
 TIME :06:56:50 07:07:37 10.8 (min) Purpose : 1  
 LOG : 4063.61 4064.17 0.6 Region : 5030  
 FDEPTH: 77 78 Gear cond.: 0  
 BDEPTH: 77 78 Validity : 0  
 Towing dir: 0° Wire out : 250 m Speed : 3.1 kn  
 Sorted : 101 Total catch: 101.00 Catch/hour: 562.67

SPECIES	CATCH/HOUR		% OF TOT. C	SAMP
	weight	numbers		
J E L L Y F I S H	557.10	0	99.01	
Sufflogobius bibarbatius	5.57	0	0.99	
Total	562.67		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 were logged for possible future multi frequency target estimation. The LSSS was 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:

### DRIFTSSKJEMA 1 - ekkolodd

DFN sept.-07

<b>ER60</b>				
Serienr: 18 kHz: 593    38 kHz: 489 GPT 120 kHz: 587    200 kHz: 492		Programversjon: 2.2.1		Driftsansvarlig: Tore Mørk
Fartøy: Dr. Fridtjof Nansen		Toktnr: 2012401		Tidsrom: 24.01 - 28.02.2012
Formål for anvendelse: Innsamling av ekkolodd rådata på tokt i Sør-Afrika og Namibia				
Tolkestasjon tilknyttet: LSSS ver. 1.5				
Ping Interval: 0,0 / 2,0 / 5,0 sek		Transmit Power: Normal		Noise Margin: 0 dB

<b>Setup:</b>	<b>Transceiver 1</b>	<b>Transceiver 2</b>	<b>Transceiver 3</b>	<b>Transceiver 4</b>
Frequency:	18 kHz	38 kHz	120 kHz	200 kHz
Transducer:	ES18-11	ES38B	ES120-7	ES200-7

#### Transceiver menu:

Mode	Active	Active	Active	Active
Transducer Type	ES18	ES38	ES120	ES200
Transd. Sequence	Off	Off	Off	Off
Transd Depth	5,5/7,5 m	5,5/7,5 m	5,5/7,5 m	5,5/7,5 m
Absorption Coeff.	2,2 dB/km	8,5 dB/km	45,1 dB/km	68,9 dB/km
Pulse Length	1,024 ms	1,024 ms	1,024 ms	1,024 ms
Bandwidth	1,57 kHz	2,43 kHz	3,03 kHz	3,09 kHz
Max. Power	2000 W	2000 W	250 W	120 W
2-way Beam Angle	-17,0 dB	-20,6 dB	-20,8 dB	-20,7 dB
Gain	22,53 dB	25,47 dB	25,30 dB	24,19 dB
SA correction	-0,73 dB	-0,71 dB	-0,39 dB	-0,26 dB
Angle Sens. Along	13,9	21,9	21,0	23,00
Angle Sens. Athw.	13,9	21,9	21,0	23,00
3 dB Beamw. Along	11,46 °	7,37 °	7,06 °	6,61 °
3 dB Beamw. Athw.	11,29 °	7,41 °	7,07 °	6,60 °
Alongship Offset	0,10 °	0,10 °	-0,12 °	0,09 °
Athw. ship Offset	0,04 °	0,05 °	0,06 °	0,33 °

#### TS Detection menu

Min. Value	-50 dB	-50 dB	-50 dB	-50 dB
Min. Echo Length	80 %	80 %	80 %	80 %
Max. Echo Length	180 %	180 %	180 %	180 %
Max. Gain Comp.	6,0 dB	6,0 dB	6,0 dB	6,0 dB
Max. Phase Dev.	8,0	8,0	8,0	8,0

Bottom detection menu

Minimum level

-40 dB

### **Calibration**

A calibration of the acoustic instruments was conducted in Baía dos Elefantes, Angola on 7 August 2011.

### **Fishing gear**

The vessel has two different sized "Åkrahamn" pelagic trawls and one "Gisund super" bottom trawl. For all trawls, the Tyborøn, 7.8m<sup>2</sup> (1670 kg) trawl doors were used.

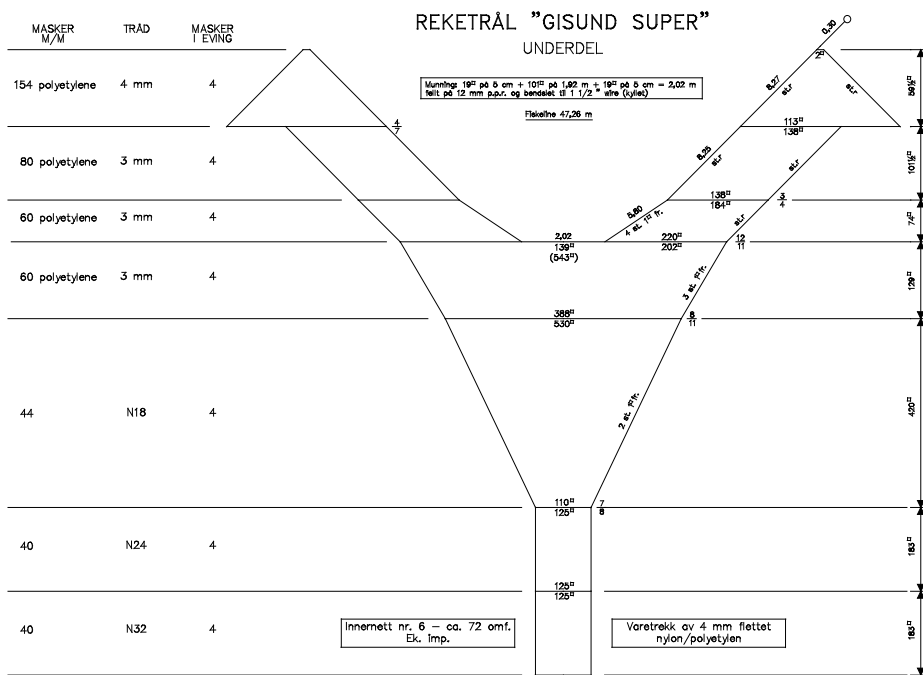
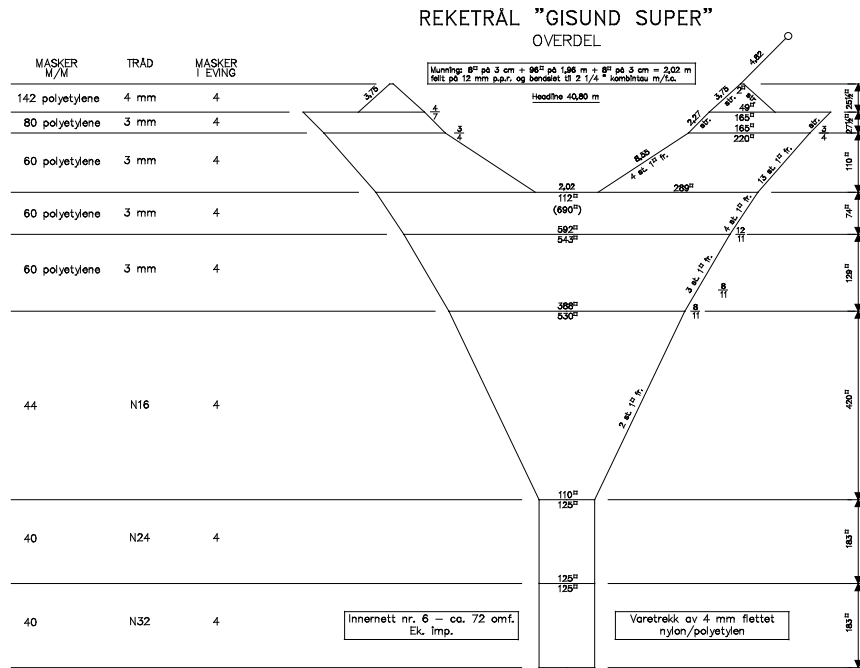


Figure 1 Design of the trawl used.

DEKIN I TROH  
N AHC MWB  
M8

RAEGED  
M2

RAEGED  
M2

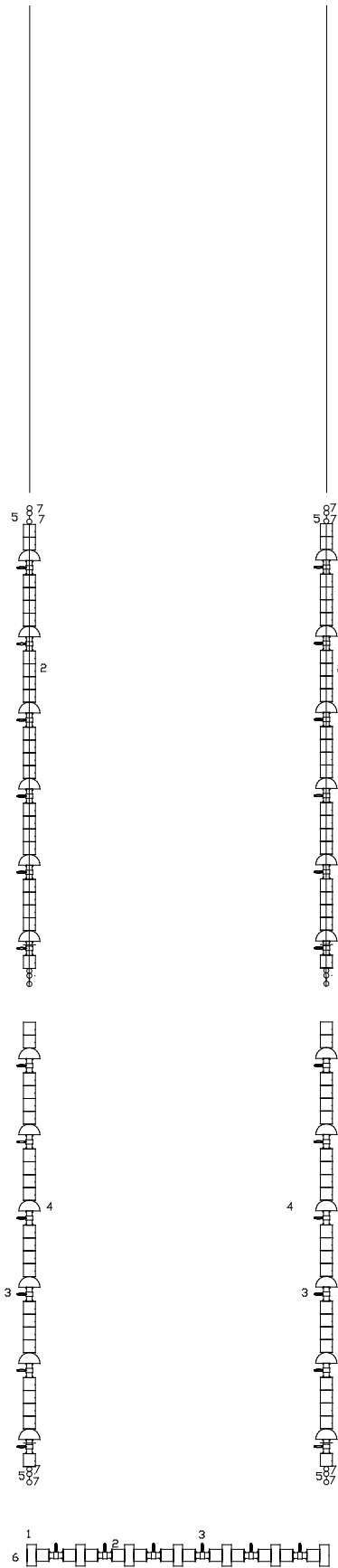


Figure 2 Schematic drawing of the ground gear used in the experiment.

### Annex 3 Depth strata in MN<sup>2</sup> by latitude in Namibia and South Africa.

#### NAMIBIA. Depth strata by 1° latitude in NM<sup>2</sup>

(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°15'-18°	47	162	490	243	95	63	65	46	46	54	47	1360	1165
18-19°	287	324	783	822	154	128	119	101	100	87	128	3033	2618
19-20°	186	435	1259	810	1090	328	287	266	192	241	220	5314	4396
20-21°	229	401	1378	883	987	286	265	258	272	281	280	5519	4429
21-22°	372	547	1644	563	893	257	201	200	199	184	179	5238	4477
22-23°	479	709	2196	1086	929	154	126	127	108	97	142	6153	5678
23-24°	244	376	2006	1074	670	238	153	175	139	136	130	5340	4760
24-25°	394	433	1343	822	753	238	149	161	162	166	144	4764	4131
25-26°	204	415	1580	1102	529	227	166	155	161	153	125	4817	4223
26-27°	216	184	894	986	1408	744	140	133	139	131	119	5095	4573
27-28°	119	244	1269	527	858	480	205	170				3872	3702
28-29°	211	390	4207	391	153	123	164					5639	5639
29-30°	0	0	1042	533	327	276	162	167	107	121	121	2859	2341
30°-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° latitude in NM<sup>2</sup>**

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

**South Africa. Depth strata by regions in NM<sup>2</sup>**

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
-------	------	-------	------	------	------	------	-----	-----	-----	-----	-------	-------	-------

--