



Annual Report on the Status of the Artisanal Seine Net Fishery of Rodrigues 2005

E. R. Hardman, F. E. I. Blais, M. S. Desiré, J. S. J. Raffin, S. Perrine, R. Raffaut and M. Chinien-Chetty

Shoals Rodrigues, Pointe Monier, Rodrigues

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Summary

As a continuation of a monitoring programme started in 2002, catch assessments were made by Shoals Rodrigues staff during the seine net open season between 1st March and 30th September 2004. Seine net teams from Port Sud Est, Pointe L'Aigle, Baie du Nord and Pointe Corail were followed during the course of a fishing day. The time and position of each haul was recorded and all fish caught were transferred to the survey boat where the species and total length of each individual was determined.

14,024 individuals were landed, with a total weight of 5,592 kg. The catches comprised of 72 fish species. The most important species within the catch were the Rabbitfish (Cordonnier) *Siganus sutor* and the Goatfish (Rouget), *Mulloidichthys flavolineatus*. The Emperor (Capitaine) *Lethrinus nebulosus*, Surgeonfish (Lorsan) *Acanthurus triostegus*, Mojarra (Breton) *Gerres longirostris*, Trevally (Carangue) *Caranx melampygus*, Mullet *Valamugil seheli* and Unicornfish (Corne), *Naso unicornis* were also important components of seine net catches. Comparisons with catch statistics from 2002 -2004 show that *S. sutor*, remained the most important species in all 4 years. The relative importance of *L. nebulosus* however, decreased between 2004 and 2005 whereas the relative importance of *Mulloidichthys flavolineatus* increased almost 4-fold between 2003 and 2004.

The mean length of a fishing day was 7 hours at sea, with the net deployed for 30% of the total time on average. An average fishing day comprised 10 hauls (net deployments), of which 32% did not result in the capture of any fish. An average haul landed 19.6 kg of fish (49 individuals). Combining the catches for individual hauls gives an average landing of 180 kg (451 individuals) per fishing day. Taking account of the number of fishers and the duration of the fishing day gives a catch per unit effort (CPUE) of 1.2 kg/man-hour on average, which rises to 4.3 kg/man-hour if only the time during which the net was actually in the water is considered. For all fishing teams combined, the number of fish caught per haul remained constant between 2004 and 2005, however there was a decline in the weight of fish caught per haul suggesting that the teams are catching smaller fish. The number of fish caught per day, the weight of fish caught per day and the CPUE all declined between 2004 and 2005 indicating a decline in success of the fishery.

Length-frequency was calculated for the 12 most frequently caught species. Comparisons with data from previous years indicate that the modal range has remained constant for *Gerres longirostris* and *Acanthurus triostegus*. The modal range of *Siganus sutor* and *Lethrinus nebulosus* increased between 2004 and 2005, however that of *Caranx melampygus* and *Mulloidichthys flavolineatus* decreased. The modal range was below the published length of maturity (obtained from FishBase) for 4 species and the data suggest that serious recruitment overfishing is occurring for *C. melampygus*, *L. nebulosus*, *A. triostegus* and *Naso unicornis*. A similar situation is occurring for growth overfishing, with the modal range of 6 of the 12 fish species falling below the length at maximum yield. Determination of mortality rates indicates that fishing mortality is higher than natural mortality for 5 of the 8 species. This is particularly severe for *C. melampygus* and *S. sutor*.

Although the seine net fishery appears to be operating with only a limited degree of success the proposed ban is likely to only displace the fishing effort and habitat damage from one gear to another. It seems therefore that a combination of marine reserves and an increase in mesh size will provide the most effective management of the seine net fishery in Rodrigues.

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1 Introduction

This report forms part of a continuing assessment of the artisanal seine net fishery in Rodrigues. Reference should also be made to Lynch *et al.* (2003) (2004) and (2005) for further details of the results from previous years.

The seine net fishery is of great socio-economic importance to Rodrigues. Seine net fishing is undertaken by teams of fishers, usually with between 15 and 30 men using four to eight boats. Fishers use a semi-circular net and herd fish into the net by walking towards it beating the water with poles. Eight seine net licenses were in place in 2005, with teams operating from Baie du Nord, Benglique, Pointe Corail, Port Sud Est, Pointe L'Aigle and Pointe Coton.

72 people in 2005 were licensed seine net fishers, out of a total of 1,975 registered fishers, which represents less than 4% of total fisher population. However, seine net landings make a significant contribution to total catch, totalling 189 tonnes in 2004 (S. Perrine, *pers. comm.*).

Reports suggest that fishing activities within the lagoon are impacting heavily on fish stocks and seine net catches decreased from 264 tonnes in 1994 to 157 tonnes in 1997 (FRTU, 2004). During 1997 a net buy-back scheme was introduced to reduce pressure on the lagoon. As a result the number of seine net fishers decreased by more than 75% and catches increased to 278 tonnes by 2004; catches however decreased again by 30% between 2004 and 2005. The seine net fishery also has a number of management measures in place, including a closed season (30th September to 1st March), 5 closed areas where seine net fishing is permanently prohibited, a minimum mesh size of 9 cm and minimum catch sizes for different fish species.

2 Methods

Catch assessments were undertaken by following a seine net team during the course of a fishing day. The GPS position and time of each haul were noted and all of the fish caught were transferred to the survey boat, where the species and total length of each individual was determined. The weight of each individual was estimated using calculated or published length-weight relationships. In addition, a selection of fish were returned to the laboratory where they were weighed and measurements made of total length, fork length, standard length, body depth and girth; gonads were also removed and weighed.

Surveys were carried out on 31 fishing days between 15th March and 29th September 2005 and involved large net teams from Port Sud Est, Pointe L'Aigle, Baie du Nord and Pointe Corail.

3 Results

3.1 Fishing grounds

Sites close to the fringing reef and major channels and within coral areas were frequently targeted by the seine net teams. Habitats within the fishing grounds included consolidated limestone reef flat areas, seagrass/algae beds, sandy areas interspersed with coral blocks, coral patch reefs, reef edge corals and areas of dense coral. The sites fished by the seine net teams followed during the study are shown in Figure 1.

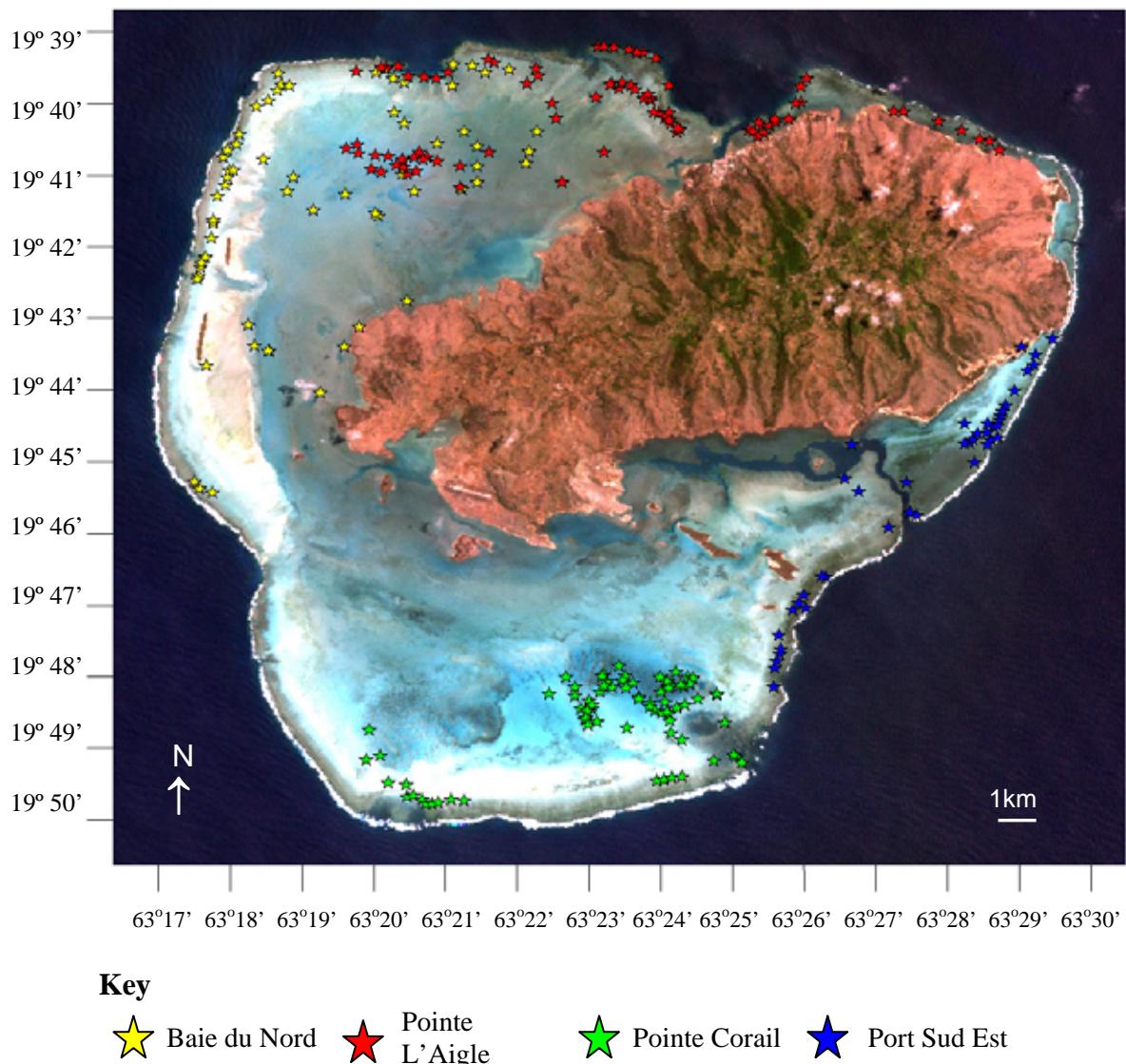


Figure 1. The sites of hauls taking by the 4 fishing teams in 2005.

3.2 Catch Data

3.2.1 Relative Importance of Different Species within the Catch

14,024 individuals were landed, with a total weight of 5,596 kg. The catches comprised of 72 fish species. The most important species within the catch were the Rabbitfish (Cordonnier) *Siganus sutor*, which accounted for 30% of the total number of individuals and 24% of the total weight landed and Rouget (Mullloidichthys flavolineatus) which accounted for 15% of the total number of individuals but only 12% of the total weight landed. Emperor (Capitaine) *Lethrinus nebulosus*, Surgeonfish (Lorsan) *Acanthurus triostegus*, Mojarra (Breton) *Gerres longirostris*, Trevally (Carangue) *Caranx melampygus* and Mullet *Valamugil seholi* were also important components of seine net catches. The 15 most common species caught, with the number of individuals and total weight landed are given in Table 1.

Table 1. The 15 most frequently caught species in the seine net fishery, with number of individuals and total weight landed.

Fish species	Number of individuals	% of total catch	Total weight (kg)	% of total catch
<i>Siganus sutor</i>	4138	29.5	1,227	23.9
<i>Mulloidichthys flavolineatus</i>	2149	15.3	488	8.7
<i>Lethrinus nebulosus</i>	1232	8.8	507	9.1
<i>Acanthurus triostegus</i>	1108	7.9	140	2.5
<i>Gerres longirostris</i>	1013	7.2	277	4.9
<i>Caranx melampygus</i>	784	5.6	250	4.5
<i>Valamugil sebili</i>	766	5.5	667	11.9
<i>Naso unicornis</i>	708	5.0	613	11.0
<i>Acanthurus spp.</i>	393	2.8	306	5.5
<i>Mugil cephalus</i>	331	2.4	228	4.1
<i>Upeneus vittatus</i>	218	1.6	81	1.4
<i>Chlorurus sordidus</i>	195	1.4	80	1.4
<i>Scarus ghobban</i>	96	0.7	151	2.7
<i>Siganus argenteus</i>	89	0.6	21	0.4
<i>Lethrinus harak</i>	81	0.6	40	0.7

Comparisons with catch statistics from 2002, 2003 and 2004 show that there is little difference in the ranking between 2002, 2003 and 2004, with 8 of the ten most frequently caught species common to all 4 years (Table 2). The Rabbitfish, *Siganus sutor*, remains the most important species; however the percentage of this species in the total catch fell from 66% in 2002 to 30% in 2005. The relative importance of the Goatfish, *Mulloidichthys flavolineatus*, decreased to rank 7 in 2004 but rose again to rank 2 (15%) in 2005. In contrast, the percentage of Emperor, *Lethrinus nebulosus*, decreased from 22% in 2004 to 9% in 2005; the Trevally, *Caranx melampygus*, also decreased from rank 3 in 2004 to rank 6 in 2005. The Mullet, *Mugil cephalus*, however increased from rank 38 in 2004 to rank 10 in 2005 and the Emperor, *Lethrinus harak* also increased from rank 21 in 2004 to rank 15 in 2005. Considering the relative importance of different species in terms of weight landed, it can be seen that *S. sutor* increased from rank 2 in 2004 to rank 1 in 2005, whereas the importance of *L. nebulosus* decreased from rank 1 in 2004 to rank 4 in 2005 (Table 3). The importance of *Naso unicornis* increased from rank 8 to rank 3; *Mulloidichthys flavolineatus* increased from rank 10 to rank 5 and *Mugil cephalus* increased from rank 39 to rank 9.

Table 2. The importance of different species in terms of rank within the total catch by number of individuals landed for the 15 most common species in 2002, 2003, 2004 and 2005.

Species	Rank			
	2005	2004	2003	2002
<i>Siganus sutor</i>	1	1	1	1
<i>Mulloidichthys flavolineatus</i>	2	7	2	2
<i>Lethrinus nebulosus</i>	3	2	4	3
<i>Acanthurus triostegus</i>	4	5	9	7
<i>Gerres longirostris</i>	5	4	3	4
<i>Caranx melampygus</i>	6	3	7	5
<i>Valamugil sebili</i>	7	6	10	18
<i>Naso unicornis</i>	8	11	16	6
<i>Acanthurus spp.</i>	9	12	29	-
<i>Mugil cephalus</i>	10	38	11	17
<i>Upeneus vittatus</i>	11	8	15	-
<i>Chlorurus sordidus</i>	12	9	12	-
<i>Scarus ghoban</i>	13	12	19	19
<i>Siganus argenteus</i>	14	19	6	8
<i>Lethrinus harak</i>	15	21	24	19
<i>Mulloidichthys vanicolensis</i>	24	10	5	9
<i>Lethrinus mahsena</i>	17	14	38	27
<i>Sphyraena jello</i>	21	15	14	-
<i>Myripristis murdjan</i>	-	-	8	-
<i>Valamugil robustus</i>	-	-	13	-
<i>Parupeneus barberinus</i>	20	20	18	13
<i>Chanos chanos</i>	-	53	20	12
<i>Rhinecanthus aculeatus</i>	22	26	21	11
<i>Scarus spp.</i>	26	-	26	10
<i>Fistularia commersonii</i>	38	35	40	14

Table 3. The relative importance of different species within the total catch by weight landed, giving the ranking and the percentage of the total catch for the 15 most common species from 2002, 2003, 2004 and 2005.

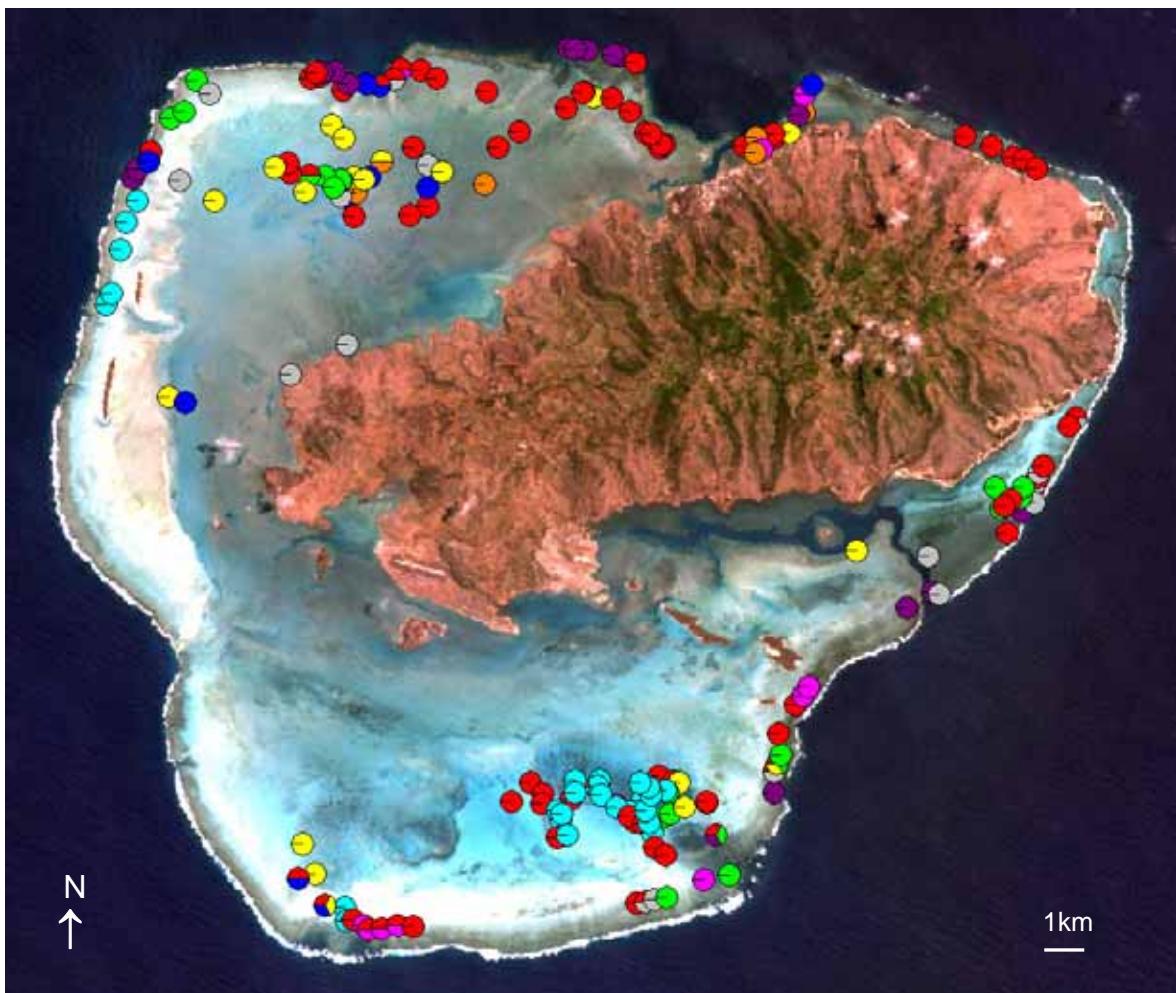
Species	Rank			
	2005	2004	2003	2002
<i>Siganus sutor</i>	1	2	1	1
<i>Valamugil seheli</i>	2	3	3	12
<i>Naso unicornis</i>	3	8	15	2
<i>Lethrinus nebulosus</i>	4	1	2	5
<i>Mulloidichthys flavolineatus</i>	5	10	4	7
<i>Acanthurus</i> spp.	6	11	23	-
<i>Gerres longirostris</i>	7	5	5	6
<i>Caranx melampygus</i>	8	4	6	4
<i>Mugil cephalus</i>	9	39	11	16
<i>Scarus ghobban</i>	10	6	19	18
<i>Acanthurus triostegus</i>	11	12	18	13
<i>Caranx papuensis</i>	12	25	13	11
<i>Upeneus vittatus</i>	13	7	20	-
<i>Chlorurus sordidus</i>	14	9	17	-
<i>Lethrinus harak</i>	15	18	22	25
<i>Naso tuberosus</i>	16	-	37	14
<i>Kyphosus cinerascens</i>	17	46	12	27
<i>Sphyraena jello</i>	19	13	14	-
<i>Siganus argenteus</i>	21	29	8	9
<i>Parupeneus barberinus</i>	24	32	24	15
<i>Mulloidichthys vanicolensis</i>	31	14	7	10
<i>Hipposcarus harid</i>	35	15	30	-
<i>Scarus</i> spp.	36	-	27	8
<i>Chanos chanos</i>	-	24	16	3
<i>Valamugil robustus</i>	-	-	9	-
<i>Myripristis murjan</i>	-	-	10	-

The regularity with which these species occurred in individual hauls was also considered, and the results are given in Table 4. *Siganus sutor* remains the most important species being caught on 77% of fishing days and in 58% of the hauls. *Lethrinus nebulosus* became less important being caught on only 48% of fishing days and in 27% of hauls, whereas *Caranx melampygus* and *Gerres longirostris* became more important being caught on 75% of the fishing days and in 39% and 34% of the hauls respectively.

Table 4. The frequency of occurrence of common species, in terms of the number of days on which the species was caught, the number sets in which the species was caught and the percentage of the total number of sets this represents.

Rank	Species	% of days caught	Number of sets present in	% of total number of sets
1	<i>Siganus sutor</i>	77	166	58
2	<i>Mulloidichthys flavolineatus</i>	74	99	35
3	<i>Lethrinus nebulosus</i>	48	78	27
4	<i>Acanthurus triostegus</i>	71	83	29
7	<i>Gerres longirostris</i>	75	96	34
5	<i>Caranx melampygus</i>	75	111	39
9	<i>Valamugil seholi</i>	26	28	10
12	<i>Naso unicornis</i>	42	35	12
14	<i>Acanthurus spp.</i>	29	22	8
11	<i>Mugil cephalus</i>	16	6	2
8	<i>Upeneus vittatus</i>	26	18	6
10	<i>Chlorurus sordidus</i>	48	39	14
6	<i>Scarus ghobban</i>	48	33	12
12	<i>Siganus argenteus</i>	39	26	9
15	<i>Lethrinus harak</i>	39	24	8
no fish			76	27

Figure 2 shows the dominant fish species in each haul during 2005. *Siganus sutor* dominated the hauls of all 4 fishing teams, in all lagoon habitats. The hauls of the Pointe Corail team were also often dominated by *Mulloidichthys flavolineatus* and hauls of the Baie du Nord team were very varied, being dominated by *Lethrinus nebulosus*, *M. flavolineatus*, *Gerres longirostris* and *S. sutor*. *L. nebulosus* and *Caranx melampygus* tended to dominate catches in both coral and vegetated habitats. *Gerres longirostris* dominated catches in vegetated areas in the north at sites fished by the Baie du Nord and Pointe L'Aigle teams; *Valamugil seholi* also dominated catches in vegetated areas. In contrast, *Acanthurus triostegus* and *Naso unicornis* dominated catches on the reef flat areas and *M. flavolineatus* dominated catches on the southern patch reefs fished by the Pointe Corail team.



Key

●	<i>Siganus sutor</i>	●	<i>Gerres longirostris</i>
●	<i>Lethrinus nebulosus</i>	●	<i>Mulloidichthys flavolineatus</i>
●	<i>Caranx melampygus</i>	●	<i>Valamugil seholi</i>
●	<i>Acanthurus triostegus</i>	●	<i>Naso unicornis</i>
●	Other		

Figure 2. The dominant fish species caught during each of the hauls.

3.22 Summary Statistics for Net Hauls and Fishing Days

As shown in Table 5 the mean length of a fishing day was 7 hours at sea, with the net deployed for 30% of the total time on average. The team at Baie du Nord tended to fish for the longest (with a mean of just over 8.5 hours), whereas the Port Sud Est team was only at sea for an average of just under 6 hours. Net deployments accounted for the lowest proportion of the total day at Port Sud Est (19%) and the greatest proportion at Pointe Corail (48%).

Table 5. The mean and range for the total time at sea, total time the net was submerged, and the percentage of the total fishing day during which the net was deployed for each fishing team.

Fishing Team	Total time of fishing day (hh:mm)		Total time net submerged per day (hh:mm)		% time net in water per day	
	Mean	Range	Mean	Range	Mean	Range
Baie du Nord	8:36	06:45 – 11:10	2:38	00:47 – 4:31	30.7	8.7 – 41.7
Pointe Corail	6:56	5:55 – 8:30	3:21	2:08 – 5:11	48.3	30.8 – 74.1
Pointe L'Aigle	5:56	3:00 – 10:28	1:38	00:00 – 2:36	27.3	0.0 – 59.6
Port Sud Est	7:20	4:35 – 9:15	1:32	00:00 – 4:06	18.7	0.0 – 44.3
All Teams	7:03	3:00 – 11:10	2:09	00:00 – 5:11	29.9	0.0 – 74.1

An average fishing day comprised 10 hauls (net deployments), of which 32% did not result in the capture of any fish. The team at Pointe Corail achieved the largest numbers of hauls, with the teams at Port Sud Est and Pointe L'Aigle achieving the least. The team at Pointe Corail had the lowest proportion of hauls in which no fish at all were caught (12%), whereas at Baie du Nord 46% of hauls on average had no fish and on one day all hauls resulted in no fish. An average haul landed 19.6 kg of fish (49 individuals). The Baie du Nord team achieved the largest catch in terms of mean number of individuals (61 fish) and weight (24.0kg) per haul. Pointe Corail was the least successful team in terms of numbers of individuals and weight of catch, catching on average 43 fish with a weight of 13.1 kg per haul.

Table 6. Haul statistics for each fishing team, showing the number of sets per day, number of nil hauls (in which no fish were caught) per day and the numbers of individuals and total weight (kg) per haul.

Fishing Team	Number of hauls per day		Number of nil hauls per day		% nil hauls		Number of individuals per haul		Weight (kg) per haul	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Baie du Nord	9	5 – 14	4	1 – 6	46.1	10 – 100	61	0 – 245	24.0	0 – 178
Pointe Corail	17	12 - 20	2	0 – 5	12.2	0 – 25	43	0 – 282	13.1	0 – 62
Pointe L'Aigle	8	0 – 14	2	0 – 5	29.3	0 – 83	48	0 – 408	21.4	0 – 314
Port Sud Est	8	0 – 18	3	1 – 6	34.5	11 – 60	44	0 - 586	20.6	0 – 239
All Teams	10	0 - 20	3	0 - 6	31.9	0 – 100	49	0 - 586	19.6	0 - 314

Combining the catches for individual hauls gives an average landing of 180 kg (451 individuals) per fishing day. Pointe Corail recorded the highest average catch, with 694 individuals and a weight of 208.8 kg (Table 7). Port Sud Est had the lowest average catch with 344 individuals and a weight of 161.4 kg. The teams at Baie du Nord, Pointe L'Aigle and Port Sud Est each returned without any catch on 1 fishing day, with Pointe Corail being the only team to catch fish on every day. Taking account of the number of fishers and the duration of the fishing day gives a catch per unit effort (CPUE) of 1.2 kg/man-hour on average, which rises to 4.3 kg/man-hour if only the time during which the net was actually in the water is considered. The CPUE based on total time at sea was highest for Pointe Corail and lowest for Baie du Nord, however based on the time the net was actually in the water, the CPUE was highest for Port Sud Est.

Table 7. Statistics for each fishing team, giving the number of individuals and total weight (kg) per fishing day and the catch per unit effort (CPUE) in kg/man-hour based on total time at sea and time of actual net deployment.

Fishing Team	Total number of individuals per day		Total weight (kg) per day		Catch per Unit Effort (kg/man-hour)	
	Mean	Range	Mean	Range	Total time at sea	Time net deployed
Baie du Nord	520	0 – 1278	204.4	0 – 583	1.0	3.0
Pointe Corail	694	322 – 901	208.8	148 – 285	1.5	3.3
Pointe L'Aigle	358	0 – 771	161.7	0 – 504	1.3	4.3
Port Sud Est	344	0 – 1160	161.4	0 – 504	1.1	7.1
All Teams	452	0 - 1278	180.2	0 - 583	1.2	4.3

Comparisons with data from 2002, 2003 and 2004 show that the proportion of hauls which resulted in no fish at all remained fairly consistent between 2002 – 2004, however increased to 32% in 2005 (Table 8). There was a decline in the number of individuals caught per haul from 87 in 2003 to 51 in 2004 and 49 in 2005. The number of fish caught per day decreased from 712 in 2003 to 452 in 2005. There was also a decrease in the average weight of hauls from 29.4 kg in 2003 to 25.1 kg in 2004 and 19.6 kg in 2005; weight of the catch per day also fell from 241 kg in 2004 to 180 kg in 2005. Catch per unit effort decreased from 2.1 kg/man-hour in 2003 to 1.2 kg/man-hour in 2005 and from 6.9 kg/man-hour to 4.3 kg/man-hour when only the time the net is submerged is considered.

Table 8. Average haul and fishing day statistics for all fishing teams, showing the percentage of nil hauls (in which no fish were caught) per day and the numbers of individuals and total weight (kg) per haul for 2002, 2003 and 2004.

	2005	2004	2003	2002
% nil hauls	32	24	17	23
Number of fish per haul	49	51	87	65
Weight (kg) per haul	19.6	25.1	29.4	27.0
Number of fish per day	452	491	712	295
Weight (kg) per day	180.2	241.4	240.3	123.0
CPUE total time at sea (kg/man-hour)	1.2	1.7	2.1	2.7
CPUE time net submerged (kg/man-hour)	4.3	5.4	6.9	21.2

3.3 Length Frequency

For those fish species for which more than 100 individuals were caught, the length frequency was calculated based on total length (in cm) (Figures 3 – 14). This allowed the modal range (i.e. the size class into which most individuals fell) to be determined for the different species (Table 9).

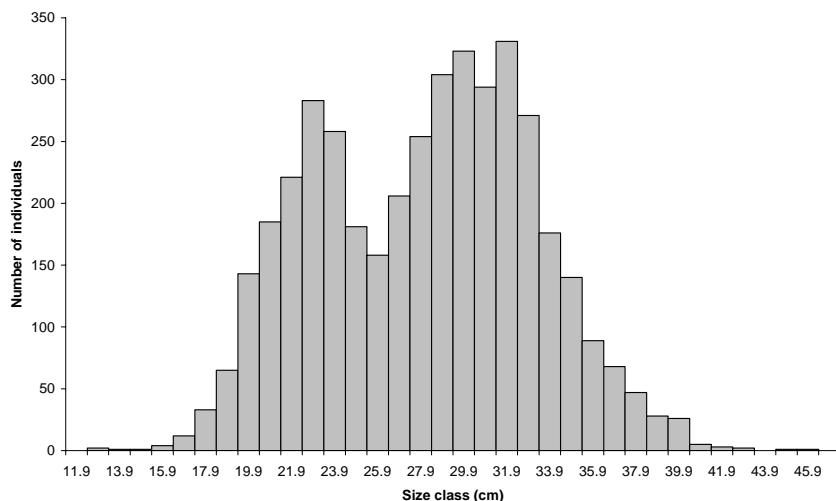


Figure 3. Length-frequency histogram for *Siganus sutor* individuals caught by the seine net fishery.

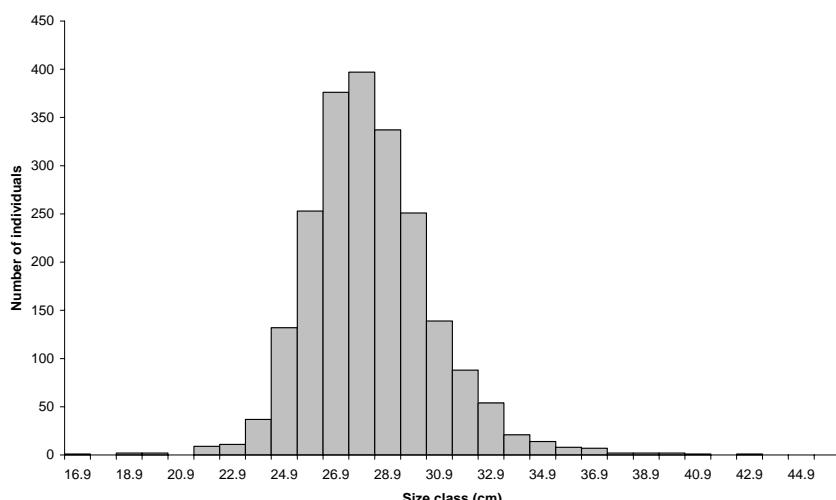


Figure 4. Length-frequency histogram for *Mulloidichthys flavolineatus* individuals caught by the seine net fishery.

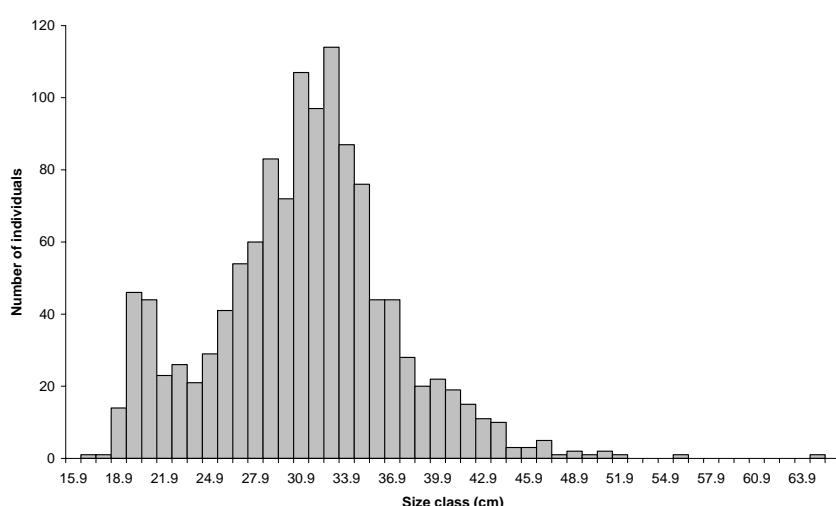


Figure 5. Length-frequency histogram for *Lethrinus nebulosus* individuals caught by the seine net fishery.

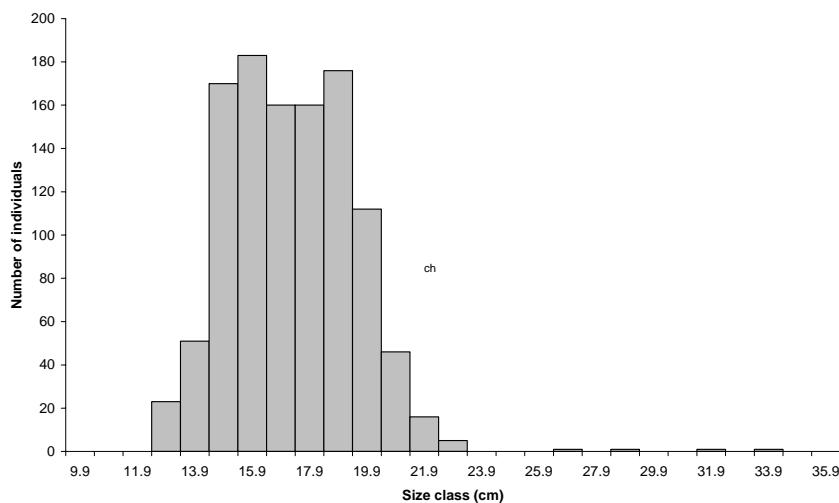


Figure 6. Length-frequency histogram for *Acanthurus triostegus* individuals caught by the seine net fishery.

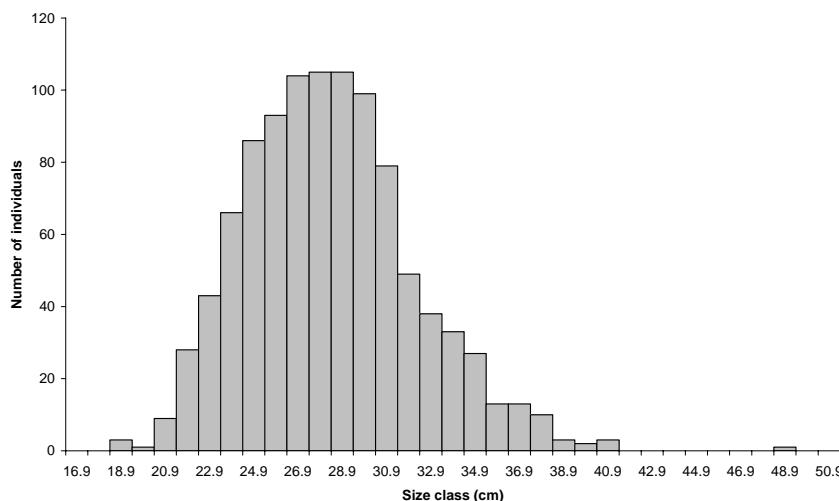


Figure 7. Length-frequency histogram for *Gerres longirostris* individuals caught by the seine net fishery.

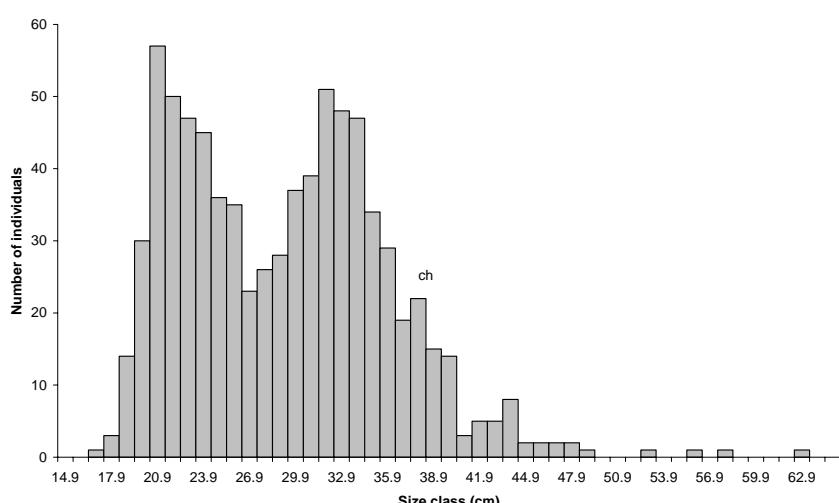


Figure 8. Length-frequency histogram for *Caranx melampygus* individuals caught by the seine net fishery.

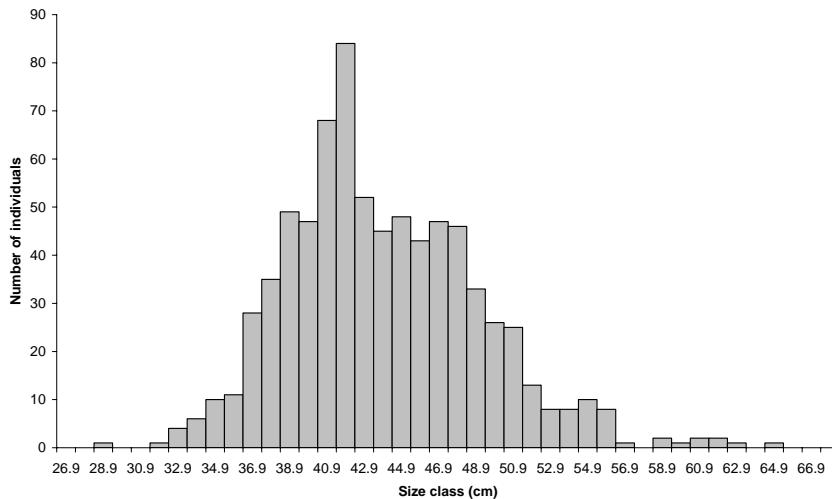


Figure 9. Length-frequency histogram for *Valamugil seheli* individuals caught by the seine net fishery.

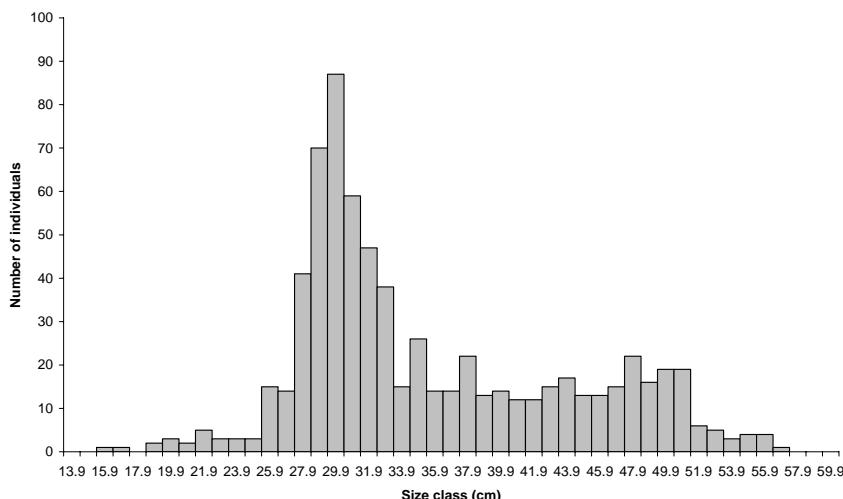


Figure 10. Length-frequency histogram for *Naso unicornis* individuals caught by the seine net fishery.

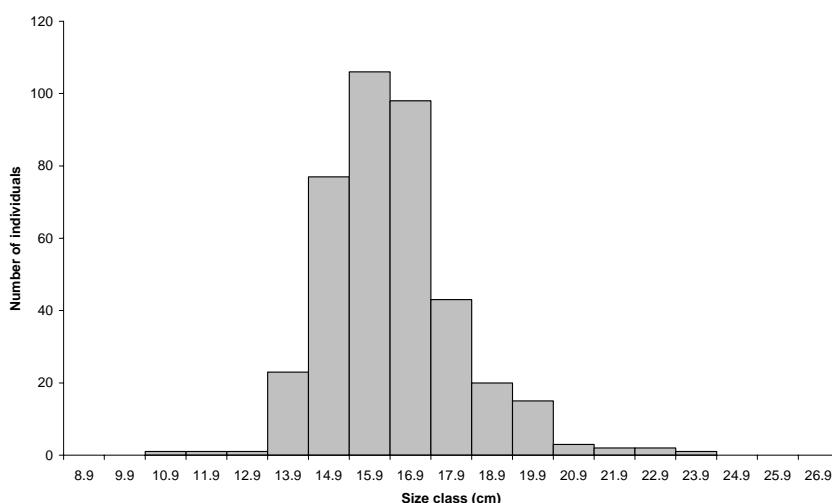


Figure 11. Length-frequency histogram for *Acanthurus* spp. individuals caught by the seine net fishery.

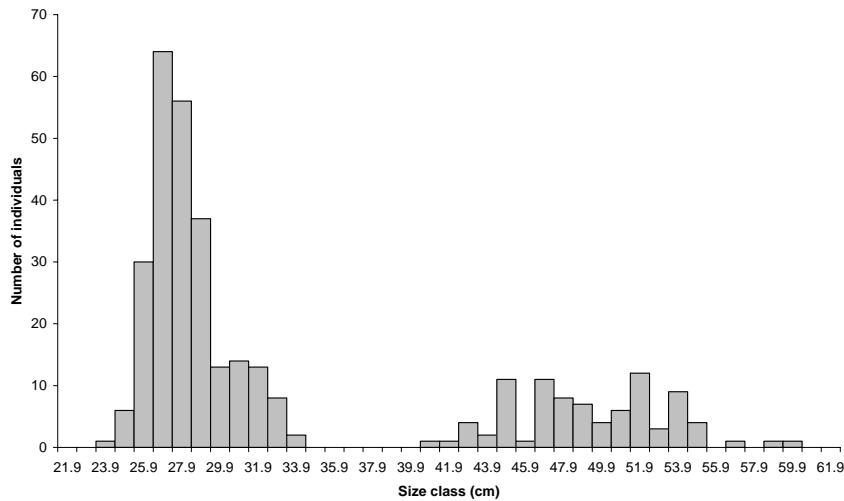


Figure 12. Length-frequency histogram for *Mugil cephalus* individuals caught by the seine net fishery.

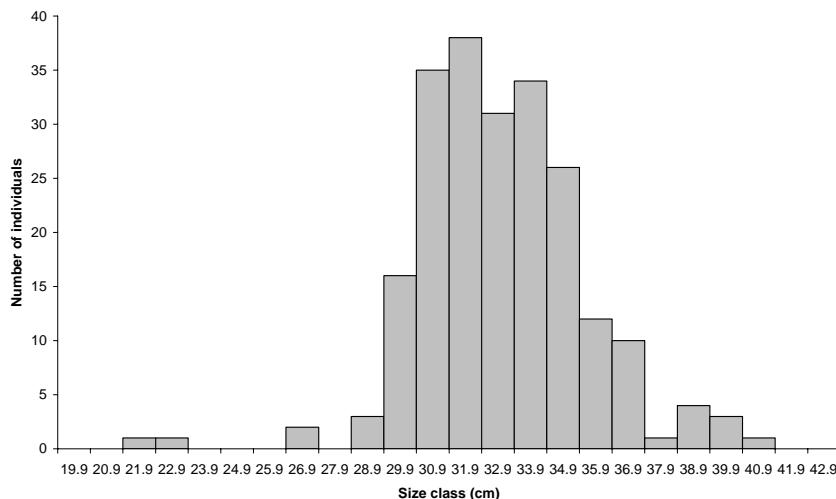


Figure 13. Length-frequency histogram for *Upeneus vittatus* individuals caught by the seine net fishery.

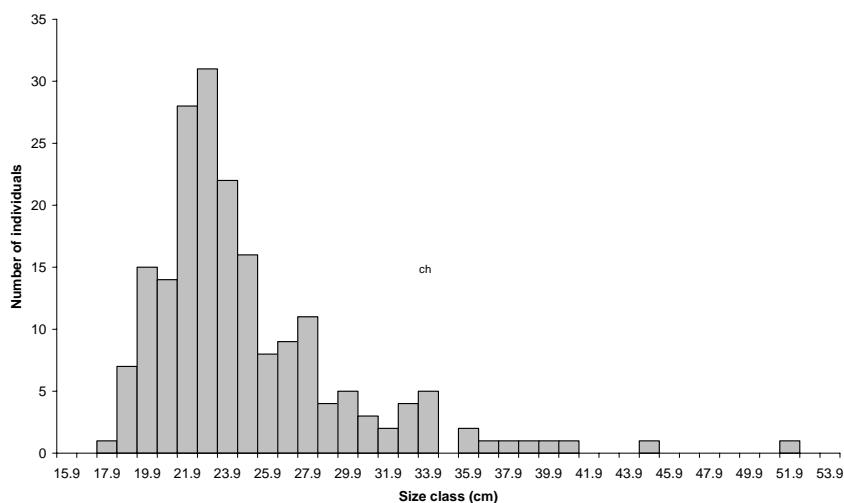


Figure 14. Length-frequency histogram for *Chlorurus sordidus* individuals caught by the seine net fishery.

If the modal range of fish caught is compared to the length of that species at maturity (obtained from FishBase, 2005) it can be seen that the modal range is below the length of maturity for 4 of the 12 most frequently caught fish (Table 9). The data suggest that serious recruitment overfishing is occurring for *Caranx melampygus*, *Lethrinus nebulosus*, *Acanthurus triostegus* and *Naso unicornis*, with juveniles accounting for 100%, 79%, 78% and 65% of the individuals landed for each species respectively. In addition, almost 50% of *Siganus sutor* are caught before they reach maturity.

Table 9. The modal range from length-frequency analysis (cm), the length at maturity (cm) and the percentage of individuals caught below the length at maturity for the 12 most commonly caught species.

Species	Modal range (cm)	Length at maturity (cm)	% caught before maturity
<i>Siganus sutor</i>	31.0 – 31.9	28.0	49
<i>Mulloidichthys flavolineatus</i>	27.0 – 27.9	24.0	3
<i>Lethrinus nebulosus</i>	32.0 – 32.9	34.3	79
<i>Acanthurus triostegus</i>	15.0 – 15.9	18.5	78
<i>Gerres longirostris</i>	27.0 – 28.9	23.8	15
<i>Caranx melampygus</i>	20.0 – 20.9	51.3	100
<i>Valamugil seheli</i>	41.0 – 41.9	34.1	2.2
<i>Naso unicornis</i>	29.0 – 29.9	36.1	65
<i>Acanthurus spp</i>	15.0 – 15.9	-	-
<i>Mugil cephalus</i>	26.0 – 26.9	24.8	2
<i>Upeneus vittatus</i>	31.0 – 31.9	28.3	3
<i>Chlorurus sordidus</i>	22.0 – 22.9	18.2	3

A similar situation occurs for growth overfishing, with the modal range of 6 of the 12 fish species falling below the length at maximum yield (Table 10). This is particularly true for *Siganus sutor*, *Lethrinus nebulosus*, *Caranx melampygus*, *Acanthurus triostegus* and *Naso unicornis* of which over 75% of fish caught were below the length for maximum yield.

Table 10. The modal range from length-frequency analysis (cm), the length at maximum yield (cm) and the percentage of individuals caught below the length of maximum yield for the 15 most commonly caught species.

Species	Modal range (cm)	Length at maximum yield (cm)	% caught below maximum yield
<i>Siganus sutor</i>	31.0 – 31.9	32.3	84
<i>Mulloidichthys flavolineatus</i>	27.0 – 27.9	26.9	38
<i>Lethrinus nebulosus</i>	32.0 – 32.9	39.7	94
<i>Acanthurus triostegus</i>	15.0 – 15.9	19.4	92
<i>Gerres longirostris</i>	27.0 – 28.9	25.9	32
<i>Caranx melampygus</i>	20.0 – 20.9	63.2	100
<i>Valamugil seheli</i>	41.0 – 41.9	39.4	22
<i>Naso unicornis</i>	29.0 – 29.9	42.1	78
<i>Acanthurus spp</i>	15.0 – 15.9	-	-
<i>Mugil cephalus</i>	26.0 – 26.9	27.9	47
<i>Upeneus vittatus</i>	31.0 – 31.9	31.7	44
<i>Chlorurus sordidus</i>	22.0 – 22.9	20.2	17

If the modal range is compared for 6 fish species caught in 2002, 2003, 2004 and 2005 it can be seen that the modal range has remained constant for *Gerres longirostris* and *Acanthurus triostegus* over the 3 years (Table 11). The modal range of *Siganus sutor* and *Lethrinus*

nebulosus increased between 2004 and 2005, however the modal range of *Mulloidichthys flavolineatus* decreased between 2004 and 2005 and that of *Caranx melampygus* decreased from 33.0 – 33.9 in 2004 to 20.0 – 20.9 in 2005.

Table 11. The modal range from length-frequency analysis (cm) for 6 fish species caught in 2002, 2003 and 2004.

Species	2002	2003	2004	2005
<i>Siganus sutor</i>	24.1 – 26.0	20.1 – 22.0	28.0 – 28.9	31.0 – 31.9
<i>Mulloidichthys flavolineatus</i>	28.1 – 32.0	26.1 – 28.0	28.0 – 28.9	27.0 – 27.9
<i>Gerres longirostris</i>	28.1 – 30.0	28.1 – 30.0	28.0 – 28.9	27.0 – 28.9
<i>Lethrinus nebulosus</i>	30.1 – 32.0	20.1 – 22.0	28.0 – 28.9	32.0 – 32.9
<i>Caranx melampygus</i>	36.1 – 38.0	20.1 – 22.9	33.0 – 33.9	20.0 – 20.9
<i>Acanthurus triostegus</i>	14.1 – 16.0	14.1 – 16.0	15.0 – 15.9	15.0 – 15.9

3.4 Mortality rates

Mortality rates of 8 of the most frequently caught fish species were calculated by looking at the rate of decline in numbers with size. Lengths were converted to relative age using the Von Bertalanffy parameters K, t_0 and L_∞ (obtained from FishBase, 2005) and total mortality (Z) calculated using the equation:

$$\text{Log}_e(N_{t2}) = \text{log}_e(N_{t1}) - Z \times (t_2 - t_1)$$

Natural mortality (M) was obtained from FishBase (2005) and fishing mortality (F) could therefore be calculated using the equation:

$$F = Z - M$$

The results, which are shown in Figures 15 - 22 and Table 12, indicate that fishing mortality is higher than natural mortality for 5 of the 8 species, suggesting that overfishing is occurring. Overfishing is particularly severe for *Caranx melampygus* and *Siganus sutor*, with fishing mortality rates 6-times and 3-times higher than natural mortality rates, respectively.

Table 12. Total (Z), natural (M) and fishing (F) mortality rates for 8 fish species.

	Total Mortality (Z)	Natural Mortality (M) (from FishBase)	Fishing Mortality (F)
<i>Siganus sutor</i>	4.55	1.06	3.49
<i>Lethrinus nebulosus</i>	1.15	0.40	0.75
<i>Gerres longirostris</i>	0.79	0.64	0.15
<i>Mulloidichthys flavolineatus</i>	2.42	1.14	1.28
<i>Lethrinus harak</i>	0.94	0.56	0.38
<i>Caranx melampygus</i>	2.95	0.41	2.54
<i>Valamugil seheli</i>	0.57	0.37	0.20
<i>Upeneus vittatus</i>	0.68	0.28	0.40

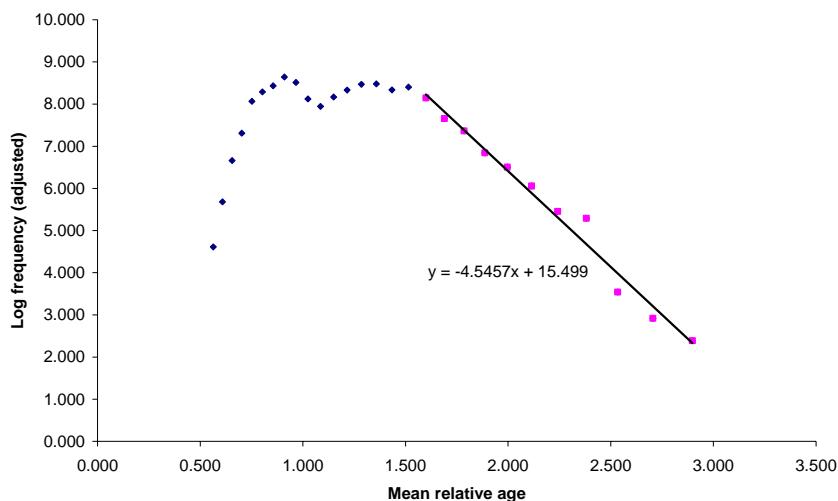


Figure 15. Total mortality rate (Z) assessment for *Siganus sutor*, where Z is the slope of the regression line.

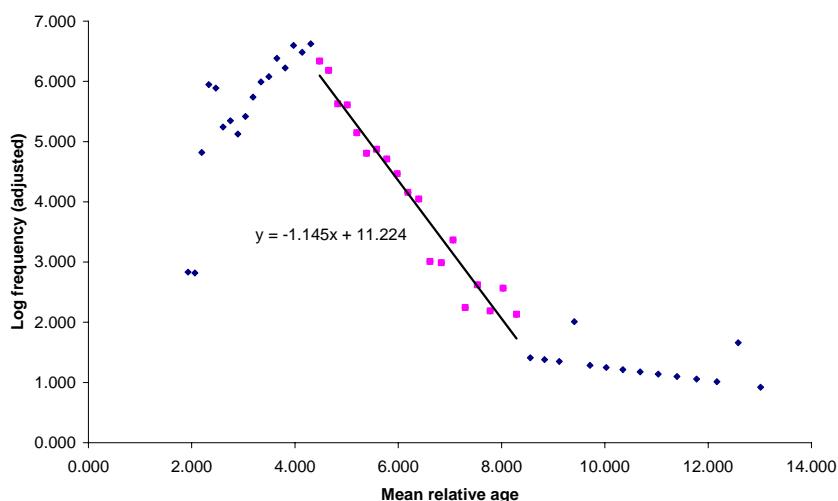


Figure 16. Total mortality rate (Z) assessment for *Lethrinus nebulosus*, where Z is the slope of the regression line.

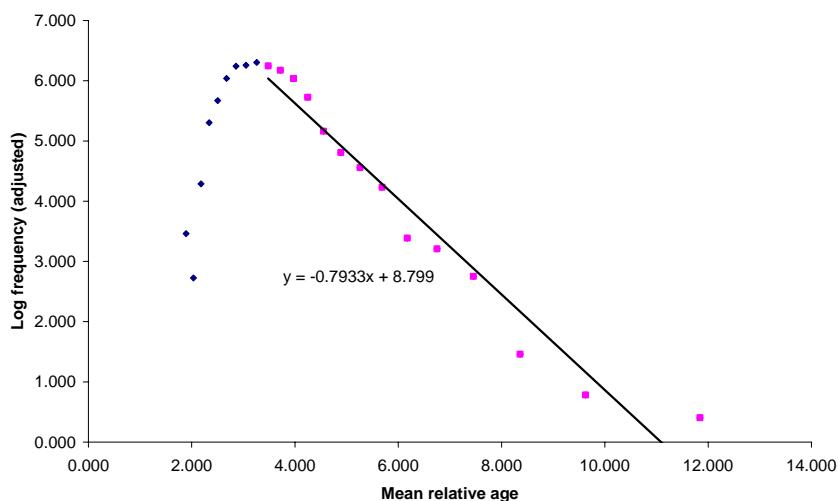


Figure 17. Total mortality rate (Z) assessment for *Gerres longirostris*, where Z is the slope of the regression line.

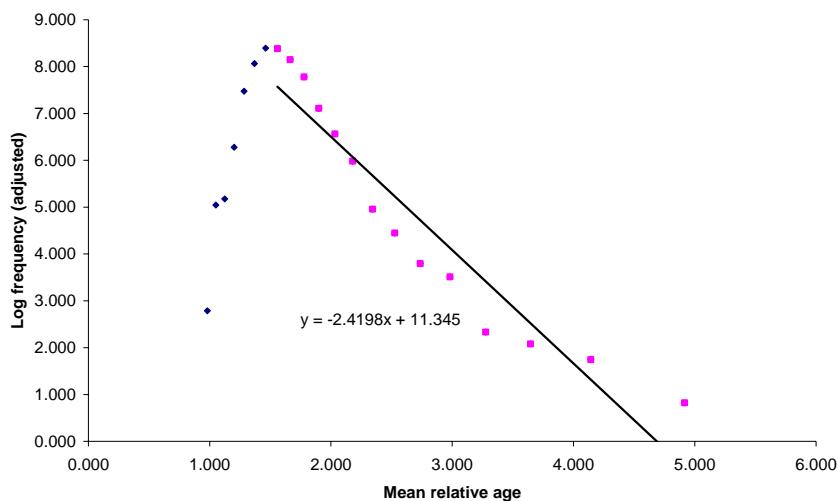


Figure 18. Total mortality rate (Z) assessment for *Mulloidichthys flavolineatus*, where Z is the slope of the regression line.

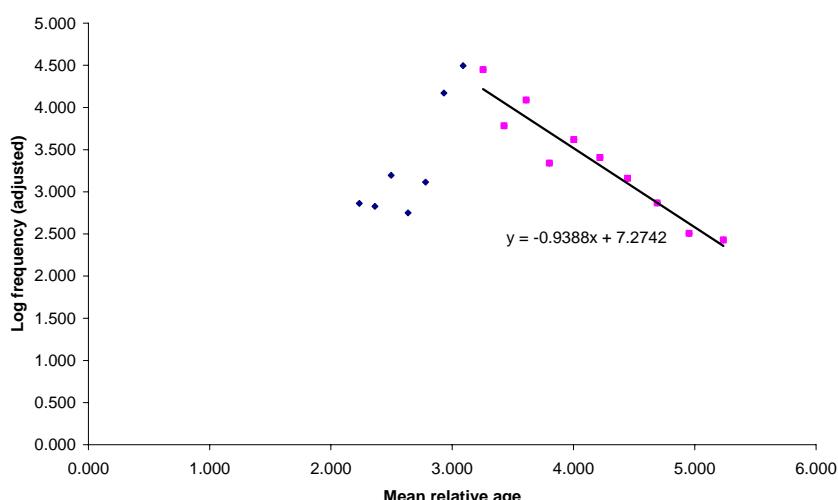


Figure 19. Total mortality rate (Z) assessment *Lethrinus harak*, where Z is the slope of the regression line.

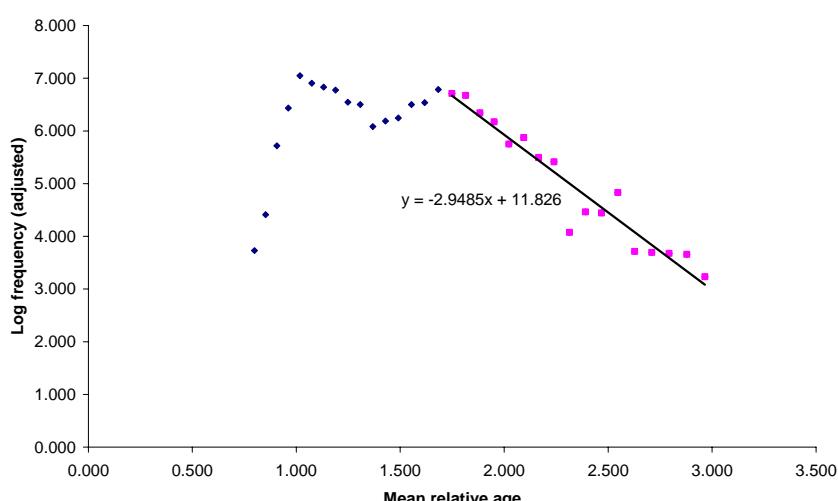


Figure 20. Total mortality rate (Z) assessment for *Caranx melampygus*, where Z is the slope of the regression line.

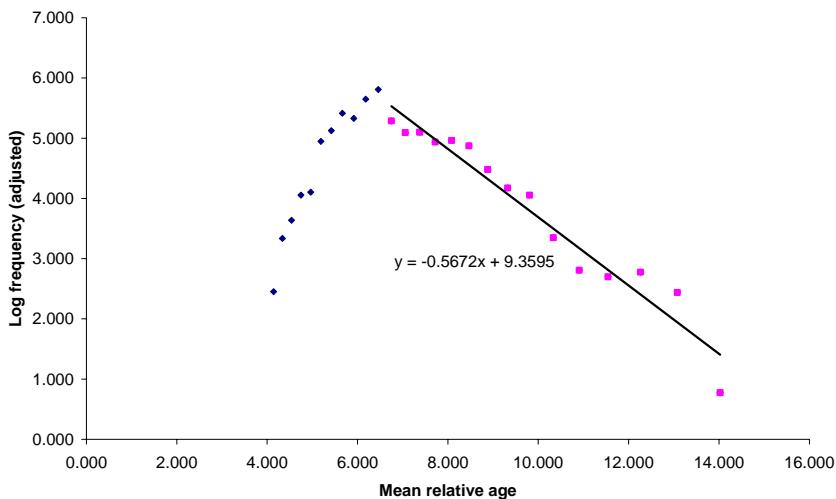


Figure 21. Total mortality rate (Z) assessment for *Valamugil seholi*, where Z is the slope of the regression line.

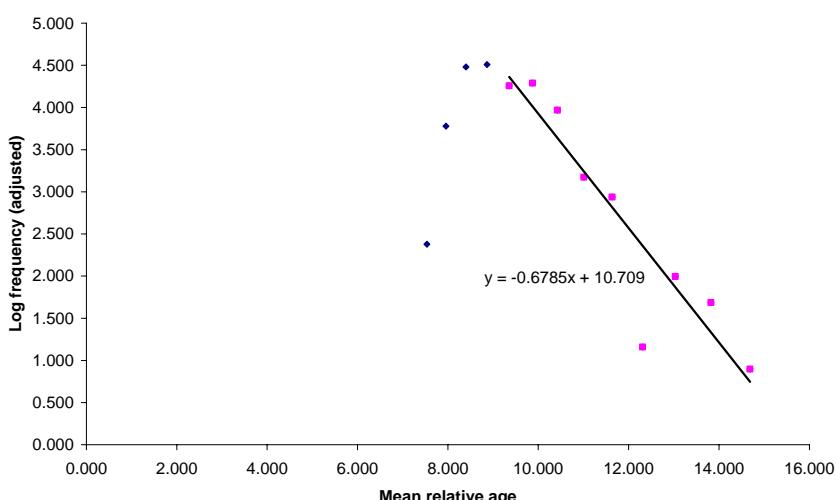


Figure 22. Total mortality rate (Z) assessment for *Upeneus vittatus*, where Z is the slope of the regression line.

3.5 Length-weight Relationships

Catch data collected in the field involves measurement of the total length (TL) of individual specimens, as there are practical constraints on obtaining weight data. Equations describing the length-weight relationship are then used to determine the weight of each individual. The length-weight relationship (based on TL) was determined for 11 species in Rodrigues using data collected in 2003 and 2004. The a and b values for each relationship are given in Table 13 and Figures 23 - 34.

Table 13. The a and b values calculated for the length-weight relationship for 11 species.

Species	a	b
<i>Siganus sutor</i>	0.013	3.030
<i>Lethrinus nebulosus</i>	0.021	2.867
<i>Caranx melampygus</i>	0.009	3.076
<i>Gerres longirostris</i>	0.007	3.166
<i>Valamugil seheli</i>	0.816	1.849
<i>Mulloidichthys flavolineatus</i>	0.006	3.171
<i>Mulloidichthys vanicolensis</i>	0.006	3.159
<i>Naso unicornis</i>	0.019	2.977
<i>Siganus argenteus</i>	0.013	3.006
<i>Epinephelus merra</i>	0.033	2.733
<i>Rhinecanthus aculeatus</i>	0.147	2.427
<i>Lethrinus harak</i>	0.004	3.349

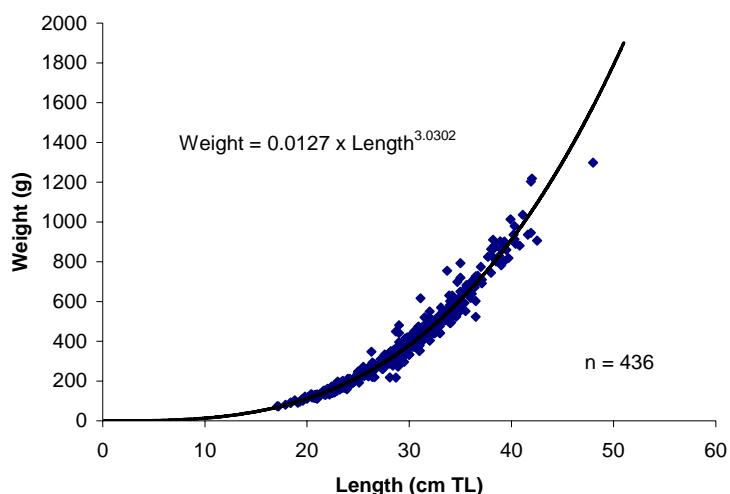


Figure 23. The relationship between length (cm) and weight (g) for *Siganus sutor*.

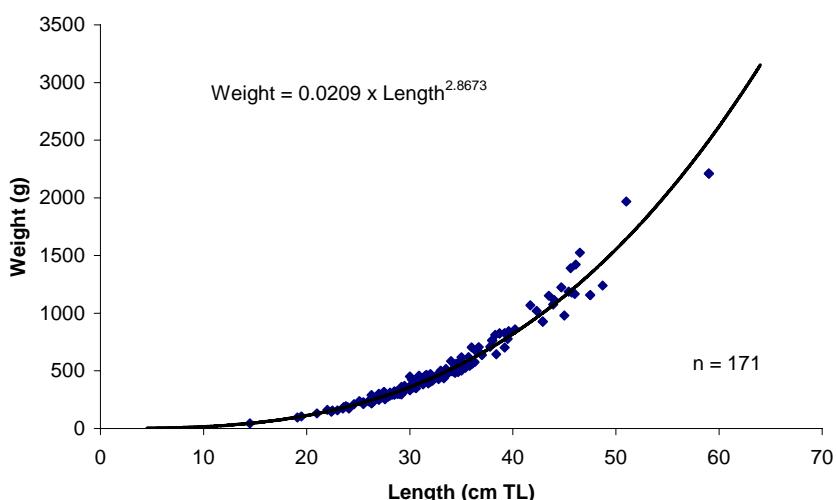


Figure 24. The relationship between length (cm) and weight (g) for *Lethrinus nebulosus*.

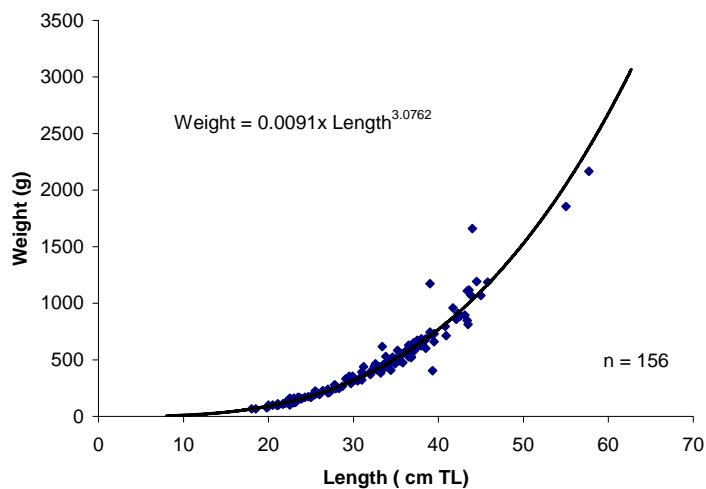


Figure 25. The relationship between length (cm) and weight (g) for *Caranx melampygus*

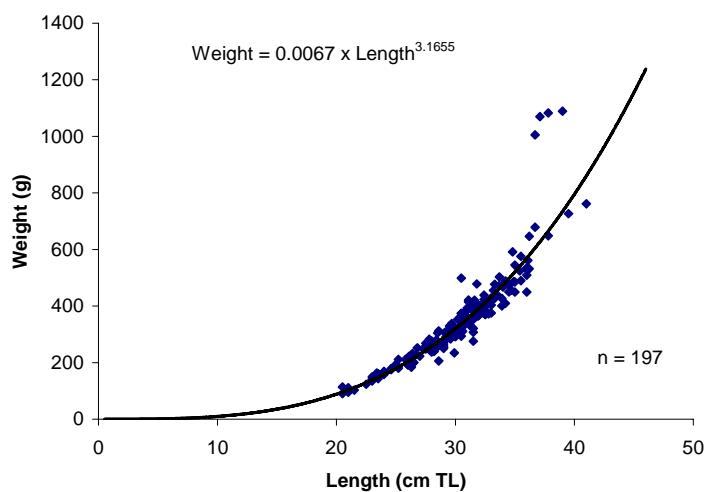


Figure 26. The relationship between length (cm) and weight (g) for *Gerres longirostris*.

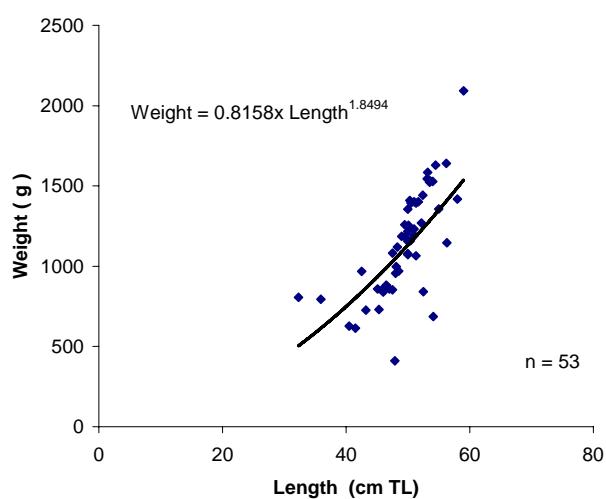


Figure 27. The relationship between length (cm) and weight (g) for *Valamugil seholi*.

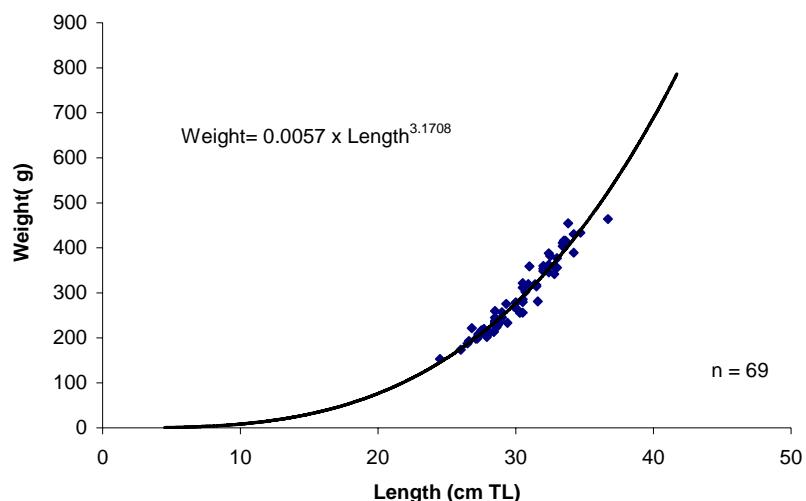


Figure 28. The relationship between length (cm) and weight (g) for *Mulloidichthys flavolineatus*.

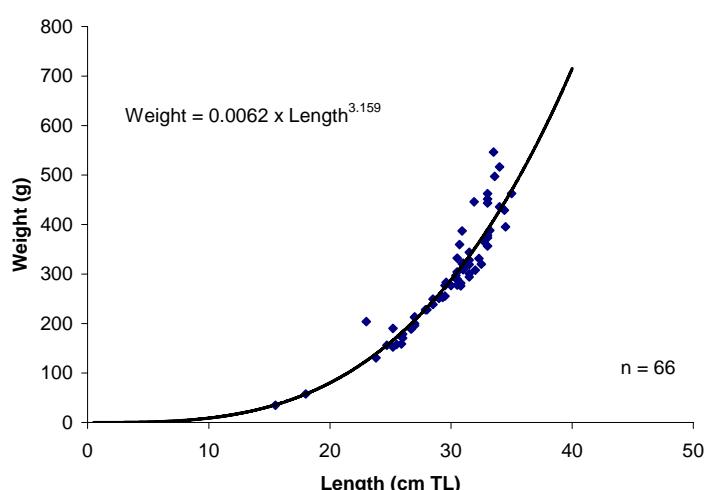


Figure 29. The relationship between length (cm) and weight (g) for *Mulloidichthys vanicolensis*.

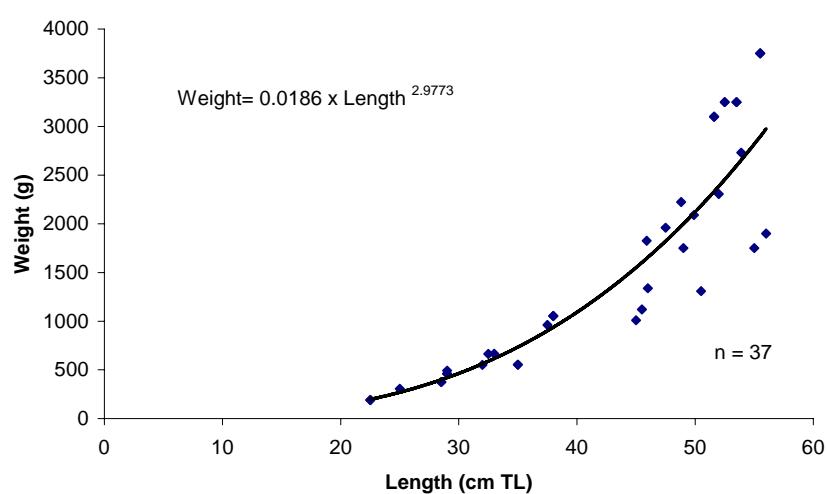


Figure 30. The relationship between length (cm) and weight (g) for *Naso unicornis*.

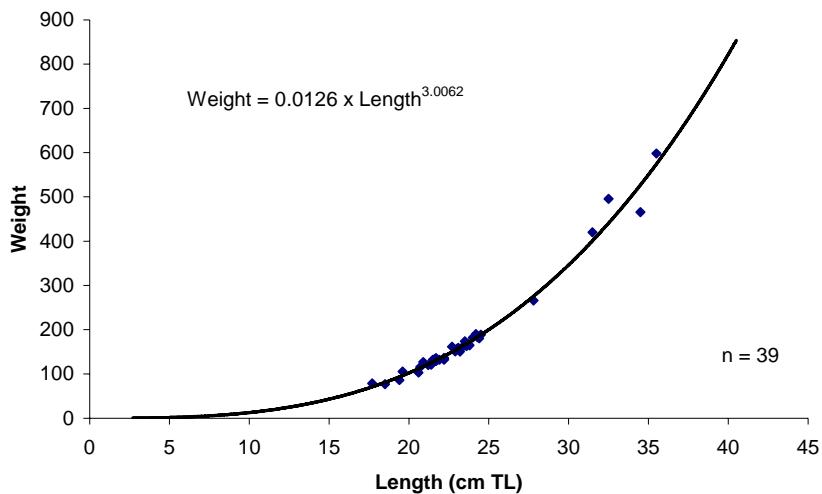


Figure 31. The relationship between length (cm) and weight (g) for *Siganus argenteus*.

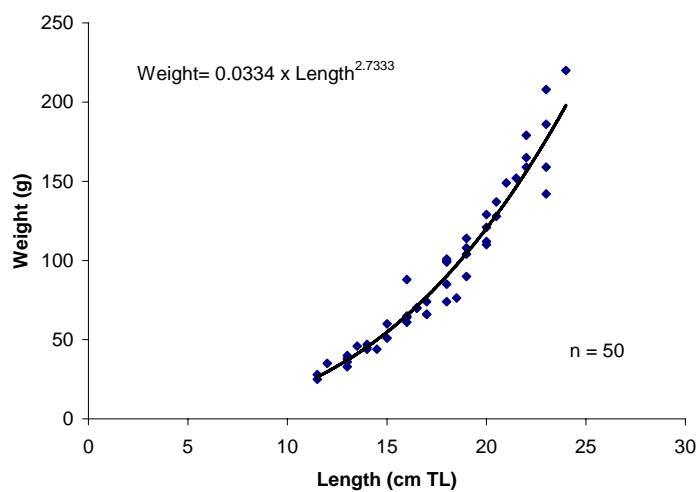


Figure 32. The relationship between length (cm) and weight (g) for *Epinephelus merra*.

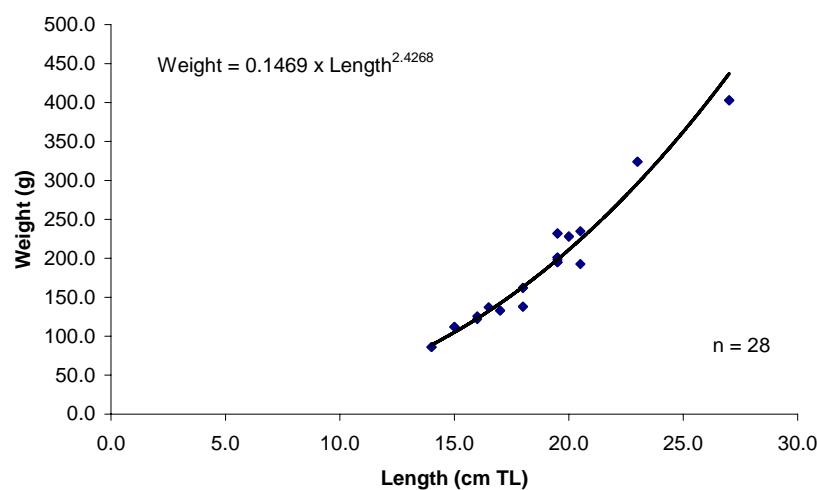


Figure 33. The relationship between length (cm) and weight (g) for *Rhinecanthus aculeatus*.

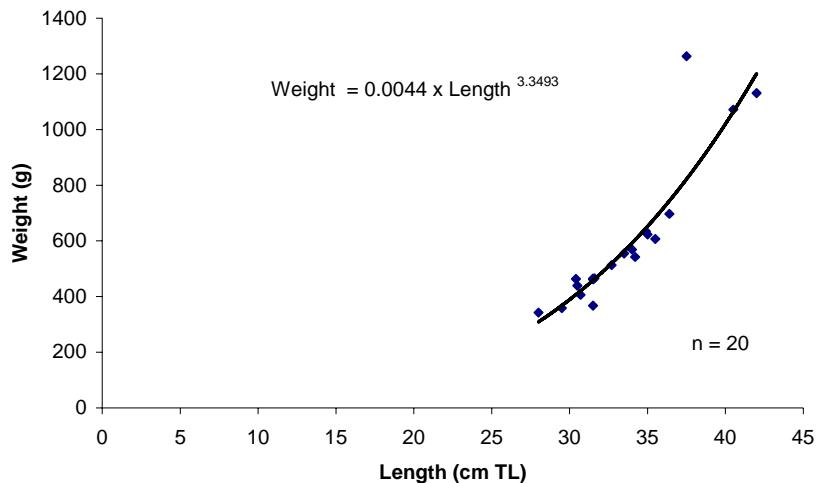


Figure 34. The relationship between length (cm) and weight (g) for *Lethrinus harak*.

4. Discussion and Management Issues

The seine net fishery appears to be operating with only a limited degree of success. Individual hauls generally returned small catches, amounting to a total of 180 kg per day on average. 32% of net deployments caught no fish and this was particularly true for the Baie du Nord team for whom almost half of net deployments on average caught no fish. The Catch per Unit Effort (CPUE) based on total time at sea was highest for the Pointe Corail team, however the CPUE based only on the time the net was submerged was highest for the team from Port Sud Est; the CPUE in both cases was lowest for the team from Baie du Nord. This difference is likely to be due to a difference in fishing techniques with the Pointe Corail team deploying a larger number of hauls during a fishing day compared to the other teams. For all fishing teams combined, the number of fish caught per haul remained constant between 2004 and 2005, however there was a decline in the weight of fish caught per haul suggesting that the teams are catching smaller fish (Lynch *et al.*, 2005). The number of fish caught per day, the weight of fish caught per day and the CPUE all declined between 2004 and 2005 indicating a decline in success of the fishery. Data from the Fisheries Research and Training Unit also indicates that catches from the senine net fishery have declined by 30%, from 278 tonnes in 2004 to 189 tonnes in 2005 (S. Perrine, *pers. comm.*).

The fishery is highly multi-species, in that 72 species were found in the catches. However, 45% of the individuals landed were from only 2 species: the Rabbitfish (Cordonnier), *Siganus sutor*, which accounted for 30% of the total number of individuals and the Goatfish (Rouget), *Mulloidichthys flavolineatus*, which accounted for 15% of individuals. These together with a further six species, *Lethrinus nebulosus*, *Caranx melampygus*, *Gerres longirostris*, *Acanthurus triostegus*, *Valamugil seholi* and *Naso unicornis* accounted for 85% of the fish landed. Therefore, the fishery is clearly dominated by a small number of species, which are principally herbivores or carnivores which feed on small benthic invertebrates; only a single piscivore is included in the list. The lack of predators indicates some imbalance within the ecosystem, especially when taking into account that historically these species accounted for a much larger proportion of the catch (Pearson, 1988).

The species composition of the catch has remained fairly constant since 2002 with 8 of 10 ten most frequently caught species common to all 4 years (Lynch *et al.*, 2003; 2004; 2005). The relative importance of *Siganus sutor* within the catch decreased by 50% between 2002 and 2003, but remained stable between 2003 and 2005. The relative importance of *Lethrinus nebulosus* however, increased almost 3-fold from 8% in 2003 to 22% in 2004, but declined

again to 9% in 2005. In contrast, the relative importance of *Mulloidichthys flavolineatus* decreased from 16% 2003 to just 4% in 2004, but increased again to 15% in 2005.

Although the modal length of *Siganus sutor* and *Lethrinus nebulosus* has increased between 2004 and 2005, that of *Caranx melampygus* and *Mulloidichthys flavolineatus* has decreased and overfishing of the most frequently caught species is occurring. Serious recruitment overfishing seems to be occurring for *C. melampygus*, *L. nebulosus*, *Acanthurus triostegus* and *Naso unicornis* with juveniles accounting for 100%, 79%, 78% and 65% of the individuals landed for each species respectively. In addition, almost half of *S. sutor* are caught before they reach maturity. Growth overfishing also appears to be affecting *S. sutor*, *L. nebulosus*, *C. melampygus*, *A. triostegus* and *N. unicornis*, as over 75% of fish caught were below the length for maximum yield. Furthermore, calculations of mortality rates suggest that mortality due to fishing is particularly severe for *S. sutor* and *C. melampygus*, with fishing mortality rates 3-times and 6-times higher than natural mortality rates, respectively.

Significant recruitment overfishing results in a decline of the size of the spawning stock, so the size of the fish population cannot be sustained and catches will fall. Landing fish that are too small also means that the fishery is not providing its maximum yield. If individuals were caught at greater length the much larger returns would be achieved for the same number of fish, as a small increase in length equates to a large increase in biomass due to the power relationship between length and weight. This would allow incomes to be enhanced without increasing the impact on the fish stocks. In order to prevent the capture of undersized individuals an increase in mesh size is needed and further work is required to determine the selection factors for the important fish species and thus determine what mesh size would allow these species to reach their maximum yield. It may also be necessary to offer a compensation package to reflect the smaller catches that will result in the first years after the change.

In addition, to increases in mesh size the establishment of marine reserves in Rodrigues will help to manage the fishery by enhancing the ecosystem as a whole. In response to the decline in fish stocks the Co-ordinating Committee for Fisheries and Marine Resources (led by the Rodrigues Regional Assembly) is now delimiting four reserve areas in the northern lagoon (Figure 42). The location of the reserves was decided in collaboration with the major stakeholders including the fishers, of whom 86% were in support. The reserves will result in the loss of fishing areas by Baie du Nord and Pointe L'Aigle teams, however these teams recognise the need to protect fish stocks with the Pointe L'Aigle team recording a decrease in catch of 10,000Rs per fisher between 2004 and 2005 (W. Meunier, pers. comm.).

The Government of Mauritius is now proposing to ban the seine net fishery, however this is likely to only displace the fishing effort and habitat damage from one gear to another. Most seine net fishers are involved in other fisheries (line, trap or harpoon) during the closed season so if seine net fishing is banned the number of fishers in other sectors is likely to increase. It seems therefore that a combination of marine reserves and an increase in mesh size will provide the most effective management of the seine net fishery.

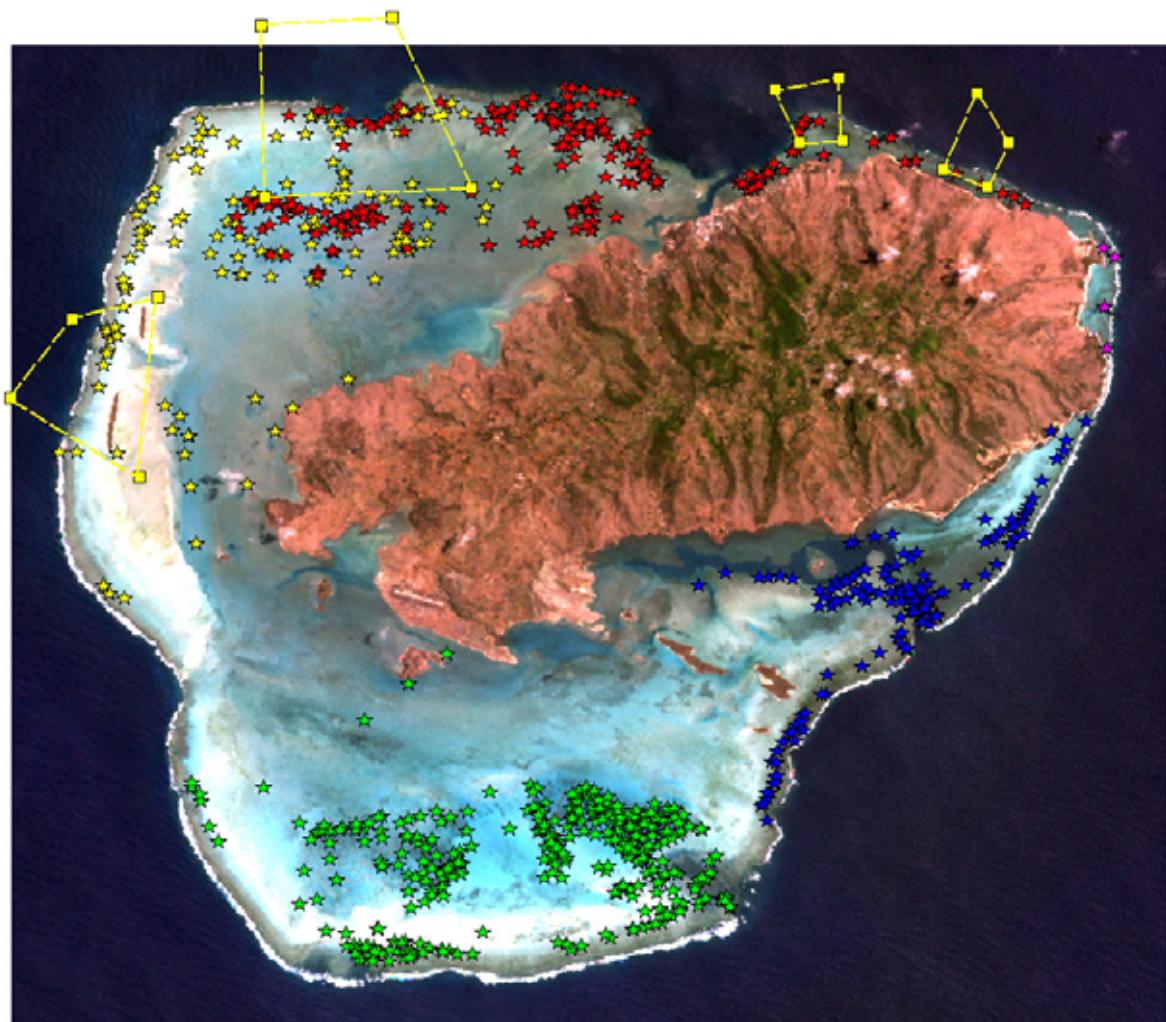


Figure 35. The position of the 4 marine reserves in the northern lagoon and the fishing sites in 2002, 2003, 2004 and 2005.

5 Conclusions

The daily catch in terms of weight of fish per haul and number and weight of fish per day decreased between 2004 and 2005 as did Catch per Unit Effort. On average 32% of hauls resulted in no fish being caught and this rose to 46% for the team at Baie du Nord.

The Rabbitfish (Cordonnier) *Siganus sutor* and the Goatfish (Rouget), *Mulloidichthys flavolineatus* were the dominant species in the fishery account for 30% and 15% of the total number of individuals, respectively. Eight species made up 85% of the total catch and these were predominantly herbivores and benthic carnivores. The lack of larger predators suggests that the ecosystem is degraded.

The modal range of *Siganus sutor* and *Lethrinus nebulosus* increased between 2004 and 2005, however that of *Mulloidichthys flavolineatus* and *Caranx melampygus* decreased. Recruitment overfishing does however appear to be occurring for *C. melampygus*, *L. nebulosus*, *Acanthurus triostegus* and *Naso unicornis*, with over 65% of fish being caught before they reach maturity. Growth overfishing is also occurring for *S. sutor*, *L. nebulosus*, *C. melampygus*, *A. triostegus* and *N. unicornis* with over 75% of fish caught before they reach the length of maximum yield. Mortality due to fishing is particularly severe for *S. sutor* and *C. melampygus*.

6 Recommendations for Further Research

- Monitoring of length-frequency data should continue and expand to determine trends over time.
- More biological data, particularly gonad weights, should be collected, and for a greater number of species, to permit better understanding of local populations.
- Further work should be carried out on fish morphology as related to net selection factors to determine the most appropriate alteration to mesh size.
- Fish tagging studies should be undertaken in order to understand fish migratory patterns.

7 References

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8 Appendices

Table A1. The number of individuals for each different species caught by the seine net fishery.

Fish Species	No. of individuals	% of total individuals	Weight (kg)	% of total weight
<i>Siganus sutor</i>	4,138	29.5	1337.2	23.9
<i>Mulloidichthys flavolimeatus</i>	2,149	15.3	488.2	8.7
<i>Lethrinus nebulosus</i>	1,232	8.8	506.6	9.1
<i>Acanthurus triostegus</i>	1,108	7.9	140.3	2.5
<i>Gerres longirostris</i>	1,013	7.2	276.9	4.9
<i>Caranx melmapygus</i>	784	5.6	249.5	4.5
<i>Valamugil seheli</i>	766	5.5	667.2	11.9
<i>Naso unicornis</i>	708	5.0	613.1	11.0
<i>Acanthurus spp.</i>	393	2.8	305.8	5.5
<i>Mugil cephalus</i>	331	2.4	227.6	4.1
<i>Upeneus vittatus</i>	218	1.6	80.5	1.4
<i>Chlorurus sordidus</i>	195	1.4	80.3	1.4
<i>Scarus ghobban</i>	96	0.7	151.1	2.7
<i>Siganus argenteus</i>	89	0.6	21.4	0.4
<i>Lethrinus harak</i>	81	0.6	39.8	0.7
<i>Caranx papuensis</i>	80	0.6	80.6	1.4
<i>Lethrinus mahsena</i>	77	0.5	18.1	0.3
<i>Anampses caeruleopunctatus</i>	65	0.5	21.5	0.4
<i>Hemiramphus far</i>	65	0.5	11.8	0.2
<i>Parupeneus barberinus</i>	45	0.3	16.8	0.3
<i>Sphyraena jello</i>	42	0.3	22.1	0.4
<i>Rhinecanthus aculeatus</i>	39	0.3	8.8	0.2
<i>Leiognathus equulus</i>	34	0.2	6.8	0.1
<i>Mulloidichthys vanicolensis</i>	32	0.2	8.4	0.2
<i>Chelinus trilobatus</i>	29	0.2	21.1	0.4
<i>Scarus spp</i>	27	0.2	4.3	0.1
<i>Scomberoides lysan</i>	25	0.2	22.4	0.4
<i>Hipposcarus harid</i>	13	0.1	5.8	0.1
<i>Lethrinus xanthochilus</i>	13	0.1	8.1	0.1
<i>Kyphosus cinerascens</i>	12	0.1	30.7	0.5
<i>Naso tuberosus</i>	12	0.1	38.4	0.7
<i>Tylosurus crocodilus</i>	11	0.1	13.4	0.2
<i>Elops machnata</i>	10	0.1	10.3	0.2
<i>Carangoides orthogrammus</i>	9	0.1	8.0	0.1
<i>Parupeneus rubescens</i>	9	0.1	1.8	<0.1
<i>Scarus viriditucatus</i>	8	0.1	11.3	0.2
<i>Fistularia commersonii</i>	7	<0.1	2.0	0.2
<i>Rhabdosargus sarba</i>	7	<0.1	14.7	0.3
<i>Scarus scaber</i>	6	<0.1	3.3	0.1
<i>Scarus psittacus</i>	5	<0.1	1.2	<0.1
<i>Acanthurus mata</i>	4	<0.1	0.6	<0.1
<i>Coris aygula</i>	3	<0.1	1.2	<0.1
<i>Calotomus carolinus</i>	2	<0.1	1.2	<0.1
<i>Cheilio inermis</i>	2	<0.1	0.6	<0.1
<i>Hemigymnus fasciatus</i>	2	<0.1	0.7	<0.1
<i>Monodactylus argenteus</i>	2	<0.1	0.5	<0.1
<i>Novaculichthys taenianus</i>	2	<0.1	0.7	<0.1
<i>Parupeneus bifasciatus</i>	2	<0.1	0.4	<0.1
<i>Parupeneus ciliatus</i>	2	<0.1	0.8	<0.1
<i>Siganus rivulatus</i>	2	<0.1	0.3	<0.1
<i>Caranx sexfasciatus</i>	2	<0.1	0.6	<0.1
<i>Chelinus chlorourus</i>	2	<0.1	0.4	<0.1
<i>Acanthurus nigricans</i>	1	<0.1	0.1	<0.1

Fish Species	No. of individuals	% of total individuals	Weight (kg)	% of total weight
<i>Albula glossodonta</i>	1	<0.1	1.7	<0.1
<i>Anampses meleagrides</i>	1	<0.1	0.2	<0.1
<i>Arothron stellatus</i>	1	<0.1	2.8	<0.1
<i>Bolbometopon muricatum</i>	1	<0.1	2.6	<0.1
<i>Chaetodon zanzibarensis</i>	1	<0.1	0.1	<0.1
<i>Crenimugil crenilabis</i>	1	<0.1	1.3	<0.1
<i>Gnathodentex aurolineatus</i>	1	<0.1	0.2	<0.1
<i>Gnathanodon speciosus</i>	1	<0.1	0.5	<0.1
<i>Gomphosus caerulus</i>	1	<0.1	0.2	<0.1
<i>Lutjanus fulvus</i>	1	<0.1	0.2	<0.1
<i>Parupeneus macronema</i>	1	<0.1	0.2	<0.1
<i>Thalassoma quinquevittatum</i>	1	<0.1	0.3	<0.1
<i>Zebrasom veliferum</i>	1	<0.1	0.2	<0.1
TOTAL	14,024		5595.7	

Table A2. Length frequency distribution for different species caught by the seine net fishery.

a. *Siganus sutor*

Size class (cm)	Frequency
12 - 12.9	2
13 - 13.9	1
14 - 14.9	1
15 - 15.9	4
16 - 16.9	12
17 - 17.9	33
18 - 18.9	65
19 - 19.9	143
20 - 20.9	185
21 - 21.9	221
22 - 22.9	283
23 - 23.9	258
24 - 24.9	181
25 - 25.9	158
26 - 26.9	206
27 - 27.9	254
28 - 28.9	304
29 - 29.9	323
30 - 30.9	294
31 - 31.9	331
32 - 32.9	271
33 - 33.9	176
34 - 34.9	140
35 - 35.9	89
36 - 36.9	68
37 - 37.9	47
38 - 38.9	28
39 - 39.9	26
40 - 40.9	5
41 - 41.9	3
42 - 42.9	2
43 - 43.9	0
44 - 44.9	1
45 - 45.9	1

b. *Lethrinus nebulosus*

Size class (cm)	Frequency
16 - 16.9	1
17 - 17.9	1
18 - 18.9	14
19 - 19.9	46
20 - 20.9	44
21 - 21.9	23
22 - 22.9	26
23 - 23.9	21
24 - 24.9	29
25 - 25.9	41
26 - 26.9	54
27 - 27.9	60
28 - 28.9	83
29 - 29.9	72
30 - 30.9	107
31 - 31.9	97
32 - 32.9	114
33 - 33.9	87
34 - 34.9	76
35 - 35.9	44
36 - 36.9	44
37 - 37.9	28
38 - 38.9	20
39 - 39.9	22
40 - 40.9	19
41 - 41.9	15
42 - 42.9	11
43 - 43.9	10
44 - 44.9	3
45 - 45.9	3
46 - 46.9	5
47 - 47.9	1
48 - 48.9	2
49 - 49.9	1
50 - 50.9	2
51 - 51.9	1
52 - 52.9	0
53 - 53.9	0
54 - 54.9	0
55 - 55.9	1
56 - 56.9	0
57 - 57.9	0
58 - 58.9	0
59 - 59.9	0
60 - 60.9	0
61 - 61.9	0
62 - 62.9	0
63 - 63.9	0
64 - 64.9	1

c. *Caranx melampygys*

Size class (cm)	Frequency
16 - 16.9	1
17 - 17.9	3
18 - 18.9	14
19 - 19.9	30
20 - 20.9	57
21 - 21.9	50
22 - 22.9	47
23 - 23.9	45
24 - 24.9	36
25 - 25.9	35
26 - 26.9	23
27 - 27.9	26
28 - 28.9	28
29 - 29.9	37
30 - 30.9	39
31 - 31.9	51
32 - 32.9	48
33 - 33.9	47
34 - 34.9	34
35 - 35.9	29
36 - 36.9	19
37 - 37.9	22
38 - 38.9	15
39 - 39.9	14
40 - 40.9	3
41 - 41.9	5
42 - 42.9	5
43 - 43.9	8
44 - 44.9	2
45 - 45.9	2
46 - 46.9	2
47 - 47.9	2
48 - 48.9	1
49 - 49.9	0
50 - 50.9	0
51 - 51.9	0
52 - 52.9	1
53 - 53.9	0
54 - 54.9	0
55 - 55.9	1
56 - 56.9	0
57 - 57.9	1
58 - 58.9	0
59 - 59.9	0
60 - 60.9	0
61 - 61.9	0
62 - 62.9	1

d. *Gerres longirostris*

Size class (cm)	Frequency
18 - 18.9	1
19 - 19.9	1
20 - 20.9	4
21 - 21.9	14
22 - 22.9	13
23 - 23.9	41
24 - 24.9	73
25 - 25.9	78
26 - 26.9	86
27 - 27.9	128
28 - 28.9	137
29 - 29.9	132
30 - 30.9	106
31 - 31.9	87
32 - 32.9	71
33 - 33.9	63
34 - 34.9	28
35 - 35.9	28
36 - 36.9	17
37 - 37.9	16
38 - 38.9	8
39 - 39.9	11
40 - 40.9	3
41 - 41.9	0
42 - 42.9	0
43 - 43.9	0
44 - 44.9	0
45 - 45.9	0
46 - 46.9	0
47 - 47.9	0
48 - 48.9	1

e. *Acanthurus triostegus*

Size class (cm)	Frequency
12 - 12.9	23
13 - 13.9	51
14 - 14.9	170
15 - 15.9	183
16 - 16.9	160
17 - 17.9	160
18 - 18.9	176
19 - 19.9	112
20 - 20.9	46
21 - 21.9	16
22 - 22.9	5
23 - 23.9	0
24 - 24.9	0
25 - 25.9	0
26 - 26.9	1
27 - 27.9	0
28 - 28.9	1
29 - 29.9	0
30 - 30.9	0
31 - 31.9	1
32 - 32.9	0
33 - 33.9	1

f. Valamugil seholi

Size class (cm)	Frequency
28 - 28.9	1
29 - 29.9	0
30 - 30.9	0
31 - 31.9	1
32 - 32.9	4
33 - 33.9	6
34 - 34.9	10
35 - 35.9	11
36 - 36.9	28
37 - 37.9	35
38 - 38.9	49
39 - 39.9	47
40 - 40.9	68
41 - 41.9	84
42 - 42.9	52
43 - 43.9	45
44 - 44.9	48
45 - 45.9	43
46 - 46.9	47
47 - 47.9	46
48 - 48.9	33
49 - 49.9	26
50 - 50.9	25
51 - 51.9	13
52 - 52.9	8
53 - 53.9	8
54 - 54.9	10
55 - 55.9	8
56 - 56.9	1
57 - 57.9	0
58 - 58.9	2
59 - 59.9	1
60 - 60.9	2
61 - 61.9	2
62 - 62.9	1
63 - 63.9	0
64 - 64.9	1

g. Mulloidichthys flavolineatus

Size class (cm)	Frequency
16 - 16.9	1
17 - 17.9	0
18 - 18.9	2
19 - 19.9	2
20 - 20.9	0
21 - 21.9	9
22 - 22.9	11
23 - 23.9	37
24 - 24.9	132
25 - 25.9	253
26 - 26.9	376
27 - 27.9	397
28 - 28.9	337
29 - 29.9	251
30 - 30.9	139
31 - 31.9	88
32 - 32.9	54
33 - 33.9	21
34 - 34.9	14
35 - 35.9	8
36 - 36.9	7
37 - 37.9	2
38 - 38.9	2
39 - 39.9	2
40 - 40.9	1
41 - 41.9	0
42 - 42.9	1

h. Upeneus vittatus

Size class (cm)	Frequency
21 - 21.9	1
22 - 22.9	1
23 - 23.9	0
24 - 24.9	0
25 - 25.9	0
26 - 26.9	2
27 - 27.9	0
28 - 28.9	3
29 - 29.9	16
30 - 30.9	35
31 - 31.9	38
32 - 32.9	31
33 - 33.9	34
34 - 34.9	26
35 - 35.9	12
36 - 36.9	10
37 - 37.9	1
38 - 38.9	4
39 - 39.9	3
40 - 40.9	1

i. *Scarus sordidus*

Size class (cm)	Frequency
17 - 17.9	1
18 - 18.9	7
19 - 19.9	15
20 - 20.9	14
21 - 21.9	28
22 - 22.9	31
23 - 23.9	22
24 - 24.9	16
25 - 25.9	8
26 - 26.9	9
27 - 27.9	11
28 - 28.9	4
29 - 29.9	5
30 - 30.9	3
31 - 31.9	2
32 - 32.9	4
33 - 33.9	5
34 - 34.9	0
35 - 35.9	2
36 - 36.9	1
37 - 37.9	1
38 - 38.9	1
39 - 39.9	1
40 - 40.9	1
41 - 41.9	0
42 - 42.9	0
43 - 43.9	0
44 - 44.9	1
45 - 45.9	0
46 - 46.9	0
47 - 47.9	0
48 - 48.9	0
49 - 49.9	0
50 - 50.9	0
51 - 51.9	1

k. *Naso unicornis*

Size class (cm)	Frequency
15 - 15.9	1
16 - 16.9	1
17 - 17.9	0
18 - 18.9	2
19 - 19.9	3
20 - 20.9	2
21 - 21.9	5
22 - 22.9	3
23 - 23.9	3
24 - 24.9	3
25 - 25.9	15
26 - 26.9	14
27 - 27.9	41
28 - 28.9	70
29 - 29.9	87
30 - 30.9	59
31 - 31.9	47
32 - 32.9	38
33 - 33.9	15
34 - 34.9	26
35 - 35.9	14
36 - 36.9	14
37 - 37.9	22
38 - 38.9	13
39 - 39.9	14
40 - 40.9	12
41 - 41.9	12
42 - 42.9	15
43 - 43.9	17
44 - 44.9	13
45 - 45.9	13
46 - 46.9	15
47 - 47.9	22
48 - 48.9	16
49 - 49.9	19
50 - 50.9	19
51 - 51.9	6
52 - 52.9	5
53 - 53.9	3
54 - 54.9	4
55 - 55.9	4
56 - 56.9	1

j. *Acanthurus sp.*

Size class (cm)	Frequency
10 - 10.9	1
11 - 11.9	1
12 - 12.9	1
13 - 13.9	23
14 - 14.9	77
15 - 15.9	106
16 - 16.9	98
17 - 17.9	43
18 - 18.9	20
19 - 19.9	15
20 - 20.9	3
21 - 21.9	2
22 - 22.9	2
23 - 23.9	1

l. Mugil cephalus

Size class (cm)	Frequency
23 - 23.9	1
24 - 24.9	6
25 - 25.9	30
26 - 26.9	64
27 - 27.9	56
28 - 28.9	37
29 - 29.9	13
30 - 30.9	14
31 - 31.9	13
32 - 32.9	8
33 - 33.9	2
34 - 34.9	0
35 - 35.9	0
36 - 36.9	0
37 - 37.9	0
38 - 38.9	0
39 - 39.9	0
40 - 40.9	1
41 - 41.9	1
42 - 42.9	4
43 - 43.9	2
44 - 44.9	11
45 - 45.9	1
46 - 46.9	11
47 - 47.9	8
48 - 48.9	7
49 - 49.9	4
50 - 50.9	6
51 - 51.9	12
52 - 52.9	3
53 - 53.9	9
54 - 54.9	4
55 - 55.9	0
56 - 56.9	1
57 - 57.9	0
58 - 58.9	1
59 - 59.9	1

Table A3. Total length (cm) and weight (g) values for different species caught by the seine net fishery.

a. *Siganus sutor*

Total length (cm)	Weight (g)										
17.9	81.1	25.5	235.0	30.0	372.8	33.4	524.0	42.5	906.4	27.0	279.2
18.8	104.1	25.5	236.5	30.0	382.8	33.5	507.0	41.9	945.2	31.4	469.2
19.1	91.2	25.5	235.0	30.0	332.7	33.5	507.0	27.5	296.5	30.4	443.2
19.5	107.9	25.5	236.5	30.0	379.4	33.6	553.0	23.0	198.3	25.4	241.2
20.0	110.9	25.6	243.0	30.0	368.0	33.7	562.5	28.5	325.9	39.5	860.0
20.1	119.2	25.6	244.1	30.0	419.0	33.9	630.6	34.0	539.1	39.1	862.2
20.5	118.2	25.6	226.1	30.0	333.8	34.0	496.8	38.0	744.5	42.0	1218.4
20.5	120.4	26.0	225.0	30.3	381.7	34.0	491.0	36.4	671.5	38.1	828.1
20.7	125.9	26.0	259.0	30.3	372.7	34.0	545.6	26.4	220.7	38.3	867.5
20.7	115.8	26.0	251.0	30.3	381.7	34.0	521.0	23.9	158.6	40.4	890.0
20.8	114.4	26.0	225.0	30.4	417.5	34.1	495.8	23.5	170.3	39.3	901.8
20.8	131.4	26.0	259.0	30.5	372.5	34.2	630.0	27.0	283.3	34.5	598.6
21.0	130.0	26.0	251.0	30.5	389.5	34.2	523.8	22.0	160.8	38.3	880.0
21.0	111.1	26.3	253.7	30.5	372.5	34.3	540.5	28.0	314.0	36.5	601.9
21.0	125.3	26.4	293.3	30.6	379.6	34.5	575.3	28.2	351.0	35.0	720.0
21.0	130.0	26.5	271.0	30.8	392.4	34.6	605.0	26.6	274.9	40.3	980.0
21.3	136.2	26.5	264.6	30.8	392.4	34.6	562.5	26.3	347.4	31.7	442.6
21.5	138.3	26.6	265.4	30.9	442.9	34.8	602.8	40.3	912.8	31.5	446.1
21.6	150.5	26.6	219.1	30.9	427.6	34.8	543.0	36.5	522.8	30.0	403.9
21.6	134.1	26.6	260.5	31.0	379.0	35.0	583.6	38.8	829.5	29.6	413.9
21.7	145.7	26.6	286.0	31.0	426.6	35.0	567.0	30.2	386.8	29.0	359.8
21.7	133.6	26.7	262.4	31.0	432.0	35.1	627.4	27.6	333.7	30.9	470.3
21.8	130.3	27.1	283.3	31.0	353.0	35.4	592.5	28.3	313.1	33.8	517.0
22.1	153.4	27.4	261.0	31.0	354.3	35.8	643.3	27.8	303.0	29.0	395.6
22.1	142.1	27.4	261.0	31.0	397.4	36.0	618.0	26.4	254.8	21.0	133.2
22.4	172.2	27.5	272.0	31.0	418.5	36.1	638.9	26.4	280.0	36.5	715.2
22.5	140.5	27.5	302.5	31.0	456.1	36.1	638.9	26.2	278.8	34.0	602.1
22.5	170.7	27.5	272.0	31.0	417.8	36.5	692.1	35.0	650.7	38.2	911.2
22.6	159.8	27.7	279.4	31.0	379.0	36.5	727.3	33.0	533.4	36.1	700.8
22.6	159.7	27.7	279.4	31.0	426.6	37.1	691.0	32.5	460.4	37.7	824.2
22.6	159.8	28.0	320.0	31.0	432.0	38.5	802.3	30.3	376.4	31.1	616.0
22.7	180.3	28.0	288.0	31.0	353.0	39.0	862.4	31.6	452.7	30.9	475.0
22.7	144.2	28.0	331.6	31.0	354.3	39.0	783.0	29.7	378.2	38.9	903.0
22.9	169.8	28.0	337.2	31.1	465.4	39.3	803.5	31.0	444.2	33.7	754.5
22.9	171.2	28.0	323.5	31.2	397.1	39.7	818.5	31.5	431.9	35.0	793.2
22.9	150.4	28.0	322.2	31.3	472.0	40.2	936.5	28.5	357.9	34.7	698.3
23.2	157.3	28.0	320.0	31.4	428.6	41.6	936.0	27.5	303.8	31.5	520.4
23.5	167.0	28.0	288.0	31.4	447.1	25.5	238.4	28.8	312.4	20.6	126.1
23.5	171.0	28.0	331.6	31.5	448.3	27.1	282.5	28.3	330.9	21.9	145.0
23.5	178.6	28.0	337.2	31.5	425.8	24.3	195.8	27.2	309.8	21.7	152.4
23.5	167.0	28.0	323.5	31.5	482.5	40.8	881.1	23.3	191.5	19.8	121.6
23.5	171.0	28.2	321.5	31.5	461.4	23.5	202.2	27.9	307.8	21.7	142.5
23.7	165.8	28.2	321.5	31.6	450.0	27.9	313.0	26.6	262.9	23.9	192.7
23.8	189.9	28.3	290.0	31.9	424.2	29.5	296.3	26.4	254.9	23.2	174.6
23.9	191.0	28.4	278.1	32.0	404.0	23.8	199.7	25.4	228.9	22.6	169.9
23.9	191.0	28.4	303.0	32.0	462.0	26.1	244.9	24.3	199.8	19.3	96.3
24.0	193.0	28.5	350.3	32.0	424.2	22.2	131.8	24.0	181.2	20.4	134.7
24.0	182.0	28.7	300.5	32.0	517.0	29.6	336.6	35.0	594.2	21.7	143.1
24.0	212.8	28.9	273.9	32.0	469.3	26.5	268.0	35.0	622.5	24.2	211.2
24.0	168.1	28.9	374.6	32.0	404.0	28.4	334.1	25.5	272.1	19.9	115.6
24.0	186.5	28.9	273.9	32.1	450.5	26.0	245.8	31.0	449.2	23.6	189.8
24.0	193.0	29.0	294.0	32.1	505.5	23.9	192.9	48.0	1298.6	22.8	179.2
24.0	182.0	29.0	342.0	32.3	489.0	28.7	217.3	33.3	550.0	17.1	73.6
24.2	186.8	29.0	346.8	32.3	480.0	20.5	131.6	37.1	709.7	19.5	107.2

Total length (cm)	Weight (g)										
24.4	201.1	29.0	359.3	32.4	452.2	28.1	218.0	29.8	419.7	19.6	101.5
24.4	190.7	29.0	310.9	32.4	489.7	34.6	524.4	41.1	1036.1	18.4	92.0
24.5	193.0	29.0	481.1	32.4	496.1	25.1	192.5	39.9	1012.9	20.9	122.9
24.5	193.8	29.0	442.4	32.5	508.3	26.3	234.6	31.0	448.3	20.9	130.8
24.5	193.0	29.0	377.5	32.5	440.0	26.5	264.4	41.9	1203.3	18.4	88.9
24.6	212.5	29.0	351.4	32.5	490.6	25.0	207.0	34.0	583.8	17.2	72.5
24.6	196.2	29.0	294.0	32.5	471.7	26.5	253.5	32.5	489.2	33.5	526.9
24.9	233.6	29.0	342.0	32.7	512.5	25.6	241.2	28.5	323.3	32.2	482.3
25.0	222.0	29.0	346.8	32.8	481.6	36.4	715.5	30.5	451.2	31.7	476.1
25.0	215.0	29.1	343.3	32.8	481.5	23.0	157.6	30.0	398.0	32.0	549.4
25.0	219.0	29.5	393.2	32.8	484.3	24.0	204.0	34.5	603.5	33.0	520.1
25.0	235.0	29.5	394.9	32.9	448.1	35.5	551.4	37.0	774.7	36.7	729.0
25.0	246.8	29.5	339.8	33.0	440.9	27.1	289.5	38.0	863.7	31.8	468.9
25.0	247.6	29.5	393.2	33.0	476.7	31.8	477.6	34.5	586.4	35.6	672.1
25.0	222.0	29.5	394.9	33.0	440.9	22.7	146.4	32.0	491.4	35.6	682.8
25.0	215.0	29.7	336.3	33.1	519.0	22.7	143.8	31.5	480.2	32.0	516.7
25.0	219.0	30.0	368.0	33.1	570.3	23.7	166.7	30.0	371.0	28.7	449.2
25.0	235.0	30.0	419.0	33.2	517.4	21.9	134.2	30.5	405.6	26.3	273.9
25.4	234.6	30.0	333.8	33.3	504.0	32.0	516.7				

b. *Gerres longirostris*

Total length (cm)	Weight (g)										
20.5	114.0	28.0	248.0	30.5	320.8	32.4	438.8	27.9	257.2	23.4	163.4
20.5	90.9	28.0	237.5	30.5	333.0	32.5	370.8	33.0	375.2	36.2	531.6
21.0	95.4	28.0	276.3	30.5	355.5	32.5	370.8	31.5	276.1	31.5	385.0
21.0	97.2	28.0	270.0	30.5	308.9	32.7	376.0	30.5	316.6	32.0	401.0
21.0	111.1	28.2	254.3	30.5	498.6	33.0	429.2	29.6	284.0	29.6	322.0
21.5	102.8	28.2	239.4	30.6	326.5	33.0	403.4	31.5	307.6	31.7	404.3
22.5	123.8	28.3	274.1	30.7	373.1	33.0	418.4	41.0	761.5	26.1	222.6
23.0	135.4	28.4	280.0	30.7	344.0	33.2	455.5	36.0	508.9	28.5	304.5
23.0	149.4	28.5	258.0	30.7	376.6	33.3	477.0	30.6	310.9	26.2	206.3
23.0	138.8	28.5	258.0	30.8	343.2	33.4	439.1	36.0	535.5	32.9	420.0
23.5	160.0	28.5	255.7	30.8	344.8	33.5	439.7	34.5	450.4	29.8	315.5
23.5	160.0	28.5	270.5	31.0	361.1	33.7	473.0	33.9	426.9	27.9	260.8
23.5	143.1	28.5	262.6	31.0	353.9	34.0	467.2	34.5	473.3	32.0	368.5
24.0	168.6	28.5	264.8	31.0	393.3	34.2	482.6	32.8	372.6	32.3	402.4
24.6	175.0	28.6	312.2	31.0	359.6	34.7	455.8	34.2	409.7	32.3	376.5
24.6	179.2	28.6	206.1	31.1	348.9	34.9	486.3	29.0	250.3	32.4	423.4
25.0	194.5	29.0	279.2	31.1	421.2	35.0	485.5	39.5	726.6	29.9	234.8
25.2	211.2	29.0	254.6	31.1	415.5	35.5	490.3	32.5	398.3	30.0	301.5
25.2	180.7	29.0	262.9	31.2	347.5	36.0	449.7	26.5	199.9	30.0	291.9
25.8	211.3	29.0	278.7	31.2	392.1	36.7	1005.7	35.0	545.2	30.2	353.4
26.0	192.0	29.0	270.2	31.2	350.0	36.7	678.9	23.0	141.7	30.5	373.7
26.0	192.0	29.0	255.0	31.2	334.3	37.1	1070.0	24.0	158.3	30.5	373.7
26.0	208.4	29.1	307.0	31.4	390.6	37.8	1083.0	24.0	164.8	29.8	328.2
26.2	206.4	29.2	290.7	31.5	321.1	37.8	648.8	33.3	427.8	27.5	268.3
26.3	183.8	29.4	309.0	31.5	366.5	39.0	1089.4	36.1	561.6	31.1	390.6
26.5	200.9	29.4	297.9	31.5	352.5	33.9	400.9	36.2	646.3	30.0	322.0
26.7	228.9	29.5	321.0	31.6	406.4	35.0	449.5	34.8	591.7	32.0	371.8
26.8	252.7	29.5	294.7	31.6	420.8	31.4	324.2	35.4	524.2	32.0	401.2
27.0	222.9	29.5	287.9	31.7	364.9	30.5	293.4	35.5	575.6	29.9	315.9
27.3	249.4	29.5	329.3	31.8	478.2	34.2	488.6	32.5	416.2	29.9	293.8
27.5	256.4	29.7	323.7	31.9	369.8	27.8	254.3	36.0	530.8	27.8	283.0
27.5	256.4	29.7	338.2	31.9	365.1	29.5	294.2	32.5	416.4	28.0	248.0
27.5	248.4	29.8	321.2	31.9	387.7	33.7	502.9	26.4	232.9		

c. *Caranx melampygus*

Total length (cm)	Weight (g)										
18.0	66.2	25.0	169.4	34.0	470.1	38.0	624.4	39.3	404.2	24.7	174.5
18.5	67.5	25.3	186.4	34.0	448.2	37.8	629.6	33.4	617.9	27.0	225.5
19.8	77.3	25.4	196.2	34.0	448.8	36.8	519.5	28.0	266.7	23.5	168.4
19.9	84.1	25.5	224.3	34.4	409.0	34.9	487.4	29.9	315.6	23.5	168.1
20.0	91.2	25.5	194.8	34.6	522.5	34.9	472.6	45.8	1186.5	38.4	670.0
20.5	99.6	27.0	221.2	34.7	493.4	38.0	662.5	43.8	1073.1	36.9	635.0
21.0	97.6	27.0	210.1	34.9	464.6	39.5	731.1	41.7	959.8	37.6	622.3
21.1	111.7	27.8	280.0	35.0	485.3	38.5	687.0	36.3	589.1	37.9	640.2
21.2	101.8	27.9	246.9	35.0	485.3	37.5	649.5	43.6	1116.8	23.7	162.9
21.7	109.6	27.9	246.9	35.0	510.3	34.0	445.1	44.5	1193.1	27.0	239.5
21.7	109.4	28.3	246.7	35.2	583.7	30.5	315.7	37.2	584.4	26.4	228.8
22.0	121.4	28.7	268.5	36.5	629.9	34.5	503.3	35.7	553.6	55.0	1856.8
22.0	117.6	29.1	332.9	37.1	651.2	27.0	225.7	36.4	546.8	31.0	323.2
22.5	145.1	29.5	355.0	37.2	625.4	26.0	194.1	43.4	1109.4	27.2	212.9
22.5	126.3	29.7	291.9	37.5	636.1	36.8	529.8	39.2	722.1	36.9	616.7
22.5	117.5	30.2	322.4	37.5	672.7	39.5	661.1	57.7	2166.9	38.5	602.1
22.5	111.1	31.0	393.6	38.0	685.9	42.6	887.9	29.9	354.8	40.9	713.6
22.5	101.5	31.2	440.1	39.0	1173.0	43.4	847.4	22.8	142.8	33.7	453.9
22.7	131.1	32.0	370.3	39.0	744.3	43.1	895.8	22.5	154.3	33.8	530.7
23.0	161.0	32.2	407.2	40.8	796.7	42.1	857.5	33.0	427.8	34.0	487.5
23.0	122.6	32.5	441.8	44.0	1661.2	42.3	910.7	36.7	611.9	25.0	173.8
23.2	142.1	32.5	445.2	45.0	1068.5	33.3	403.8	22.5	161.1	25.7	207.5
23.2	124.6	32.6	464.5	35.4	528.6	36.5	525.9	20.0	98.8	43.5	813.8
23.5	162.2	32.7	413.4	33.5	456.4	35.5	490.0	36.7	612.2	32.0	392.8
23.6	164.6	33.0	436.5	33.0	439.8	35.8	474.8	32.3	412.9	33.2	385.0
23.7	155.7	33.0	436.5	24.3	169.2	38.0	657.8	30.9	350.1	23.9	155.4

d. *Mulloidichthys vanicolensis*

Total length (cm)	Weight (g)										
15.5	34.8	30.5	277.8	33.5	546.1	31.5	328.2	27.0	196.2	29.5	276.9
18.0	57.5	30.5	288.1	30.9	386.9	31.5	294.0	28.0	227.8	30.0	276.7
23.0	204.0	30.5	304.2	33.6	497.3	32.0	308.0	28.5	238.4	30.4	297.0
23.8	130.7	30.7	281.7	33.0	462.2	32.3	331.2	28.5	249.4	30.5	332.3
24.7	156.1	30.8	276.1	30.7	359.6	32.5	319.9	29.0	251.1	30.5	289.6
25.2	152.6	30.8	281.5	31.9	446.0	33.0	373.3	29.3	253.1	34.0	516.4
25.5	157.6	30.9	321.1	29.6	283.2	33.0	378.1	29.5	255.2	33.0	451.2
25.9	158.9	31.0	308.5	33.2	388.1	33.0	356.5	27.0	213.3	31.5	319.1
26.0	170.6	31.0	321.9	27.9	228.0	34.0	435.8	27.0	212.5	31.5	343.8
26.0	178.5	31.0	310.5	32.7	366.0	34.5	395.4	33.0	443.5	25.2	190.2
26.7	188.5	31.2	319.0	34.4	429.0	35.0	462.7	31.5	300.6	27.0	200.1

e. *Lethrinus nebulosus*

Total length (cm)	Weight (g)										
14.5	45.0	33.0	500.0	28.2	297.3	27.6	288.3	31.5	456.0	36.5	665.4
19.1	96.1	33.5	517.3	30.4	354.9	28.3	294.2	35.4	526.9	31.2	400.2
19.5	103.5	34.0	584.3	28.5	316.2	30.2	370.9	36.3	574.4	40.2	857.0
21.0	130.3	34.0	496.7	26.3	218.3	32.0	471.6	36.2	582.1	42.9	925.9
22.0	160.1	34.5	555.3	29.1	340.6	39.2	827.4	35.0	587.5	38.7	824.6
22.4	145.7	34.5	561.4	28.8	298.7	46.1	1421.2	35.0	554.5	40.2	857.0
23.5	172.8	35.7	618.7	29.0	335.6	27.8	286.3	44.7	1223.1	42.9	925.9

Total length (cm)	Weight (g)										
23.6	185.9	35.8	542.3	27.0	262.7	37.0	636.2	33.3	434.5	38.7	824.6
23.8	192.1	36.0	703.8	28.1	285.4	28.0	289.4	34.2	494.8	48.7	1240.0
24.0	183.4	36.1	565.3	29.2	296.1	30.5	386.7	33.5	460.4	43.9	1075.9
24.1	172.7	37.8	708.7	30.0	350.4	33.0	460.0	30.3	367.0	44.0	1115.0
26.0	235.1	38.3	811.0	32.3	438.8	30.0	330.0	35.0	525.6	45.4	1186.4
27.0	300.7	38.4	644.0	29.4	342.6	29.5	332.0	31.8	417.9	35.0	502.8
27.5	317.7	41.7	1067.5	45.7	1179.2	29.0	309.6	33.5	484.9	36.0	559.0
27.6	252.4	42.3	1021.0	45.6	1389.5	34.4	543.3	30.2	422.6	46.0	1167.2
28.5	292.0	45.0	979.8	51.0	1968.6	31.3	381.8	28.5	321.5	39.5	777.0
28.7	320.0	47.5	1155.8	46.5	1525.2	32.0	416.9	36.9	647.8	35.5	552.8
29.0	318.1	47.5	1155.8	30.2	378.8	30.9	458.8	30.9	403.0	39.2	702.1
29.5	370.4	59.0	2210.7	32.8	428.3	25.5	211.9	35.0	617.8	34.7	526.2
30.0	364.6	59.0	2210.7	34.8	573.6	29.3	315.9	34.7	489.6	31.5	426.9
30.2	380.9	32.6	457.9	27.5	305.9	31.2	393.8	34.4	482.5	31.7	410.6
30.6	408.5	29.4	344.4	30.4	397.8	29.0	298.5	32.7	463.3	34.3	496.0
30.6	348.4	29.5	355.2	38.0	763.1	30.0	450.8	39.6	844.4	32.2	414.4
31.6	464.6	27.6	270.1	28.1	312.0	32.1	426.0	23.0	157.9	32.9	443.5
31.8	391.5	26.8	264.3	43.5	1152.0	27.0	247.7	25.5	228.0	31.9	432.9
32.0	405.8	26.5	258.9	32.1	427.6	29.5	326.3	22.5	155.2	30.2	370.3
32.8	436.4	26.4	225.8	38.0	766.1	26.3	289.2	36.7	704.9	29.2	361.1
33.0	467.5	28.0	294.0	24.6	210.0	33.5	502.5	33.1	481.5	32.8	439.5
27.9	275.9	25.1	236.3	27.2	267.4						

f. *Mulloidichthys flavolineatus*

Total length (cm)	Weight (g)										
24.5	153.3	30.5	321.6	33.5	415.8	29.9	268.7	33.0	356.2	27.3	205.8
26.5	187.8	30.5	255.9	33.6	414.6	29.3	275.7	30.0	278.3	26.0	173.7
26.6	193.0	30.9	319.7	33.6	415.9	32.9	354.6	31.5	314.6	27.5	216.4
27.3	207.0	31.4	319.0	34.2	430.3	32.0	354.1	30.5	312.0	28.4	214.0
27.5	213.8	31.6	281.0	34.2	389.3	33.4	403.7	28.5	245.0	31.0	359.0
27.9	202.0	32.0	348.4	34.7	433.5	33.8	454.6	28.5	228.3	30.7	302.4
28.0	214.3	32.4	345.7	32.0	360.0	31.5	317.2	28.5	259.9	28.5	235.5
28.4	213.6	32.4	387.9	30.1	263.2	28.7	229.0	27.7	219.8	30.5	279.4
28.5	238.1	32.4	362.5	28.1	212.1	28.9	236.2	29.0	257.0	32.5	382.1
29.0	245.5	32.8	341.9	30.3	255.6	28.5	232.4	27.1	198.1	27.3	208.9
29.4	233.2	33.0	377.1	36.7	464.2	28.6	223.3	27.2	198.4	30.0	278.6
30.5	285.4	33.4	411.2	26.8	221.4						

g. *Siganus argenteus*

Total length (cm)	Weight (g)										
17.7	78.8	21.2	119.9	21.9	132.2	23.1	159.1	23.8	164.9	35.5	598.3
18.5	76.9	21.4	121.2	22.2	132.9	23.2	155.2	24.0	182.1	27.8	266.0
19.4	86.2	21.5	132.0	22.2	132.4	23.2	150.6	24.2	190.0	23.7	168.2
19.6	105.4	21.6	133.5	22.2	136.2	23.5	174.0	24.3	183.0	23.0	157.0
20.6	102.9	21.7	130.0	22.7	161.3	23.5	166.0	24.4	180.4	21.7	135.7
20.7	115.4	21.7	129.5	22.9	151.0	23.6	163.0	24.5	188.6	20.9	127.1
31.5	420.0	32.5	495.4	34.5	465.8	39.5	267.1				

h. Valamugil seholi

Total length (cm)	Weight (g)										
40.5	627.4	50.3	1409.5	53.1	1545.4	45.1	857.8	55.0	1356.0	46.0	839.0
42.5	967.8	50.5	1393.3	53.2	1585.0	50.4	1158.1	48.5	970.0	48.1	997.2
46.5	882.6	51.0	1192.8	53.5	1523.5	50.1	1254.7	51.3	1065.3	35.9	793.7
47.5	1081.8	51.0	1401.3	54.0	1528.6	32.3	805.8	48.0	956.8	43.2	726.6
47.9	411.5	51.0	1231.6	54.1	686.6	52.2	1269.0	47.0	858.0	45.9	856.9
49.5	1184.4	51.3	1394.1	54.5	1629.5	51.7	1401.0	47.5	854.0	48.3	1119.4
50.0	1217.4	52.4	1442.0	56.2	1640.1	58.0	1418.0	50.0	1072.4	45.3	730.0
50.0	1078.4	52.5	841.9	56.3	1145.9	53.6	1531.9	41.5	614.3	49.0	1185.4
59.0	2092.2	49.5	1257.9	50.0	1155.5	50.0	1355.5	51.0	1190.7		

i. Rhinecantus acuelatus

Total length (cm)	Weight (g)										
14.0	86.0	17.0	133.0	19.5	198.2	23.0	324.0	23.0	324.0	27.0	403.0
15.0	112.0	18.0	162.0	19.5	195.0	27.0	403.0	19.5	232.0	15.0	112.0
16.0	122.0	18.0	138.0	20.0	228.0	19.5	201.0	17.0	133.0	14.0	86.0
16.0	125.6	19.5	201.0	20.5	234.7	19.5	195.0	20.0	228.0	18.0	162.0
16.5	137.3	19.5	232.0	20.5	192.6	18.0	138.0				

j. Naso unicornis

Total length (cm)	Weight (g)										
22.5	191.0	29.0	460.0	33.0	665.0	38.0	1053.0	52.5	3250.0	48.8	2225.0
22.5	191.0	29.0	492.0	35.0	553.0	47.5	1960.0	53.5	3250.0	53.9	2731.4
25.0	305.9	29.0	460.0	35.0	553.0	51.6	3100.0	53.5	3250.0	49.9	2090.6
28.5	375.0	32.0	551.5	37.5	961.9	51.6	3100.0	55.5	3750.0	45.9	1825.7
28.5	375.0	32.5	663.0	38.0	1053.0	52.5	3250.0	55.5	3750.0	45.0	1009.0
45.5	1120.8	46.0	1338.9	49.0	1750.0	50.5	1308.6	52.0	2305.5	55.0	1750.2
56.0	1900.3										

k. Epinephelus merra

Total length (cm)	Weight (g)										
16.0	61.0	20.5	137.0	22.0	159.0	15.0	51.0	13.5	46.0	18.0	101.0
23.0	186.0	21.5	152.0	22.0	165.0	13.0	33.0	11.5	25.0	14.5	44.0
24.0	220.0	20.0	112.0	20.0	129.0	16.0	64.0	13.0	40.0	16.5	70.0
18.0	74.0	22.0	179.0	19.0	104.0	18.0	99.0	12.0	35.0	13.0	36.0
20.5	128.0	15.0	60.0	17.0	66.0	19.0	114.0	11.5	28.0	18.5	76.4
23.0	208.0	19.0	108.0	18.0	100.0	16.5	70.0	14.0	45.0	14.0	44.0
21.0	149.0	20.0	121.0	16.5	70.0	17.0	74.0	14.0	47.0	16.0	65.0
23.0	159.0	16.0	88.0	19.0	90.0	18.0	85.0	13.0	38.0	17.0	66.0
23.0	142.0	20.0	110.0								

l. Lethrinus harak

Total length (cm)	Weight (g)										
40.5	1071.6	28.0	342.4	30.5	439.2	31.5	464.4	35.0	622.7	37.5	1263.9
34.9	635.1	30.7	406.4	30.4	463.0	31.5	461.7	35.5	607.0	34.2	542.2
42.0	1131.2	29.5	358.6	36.4	697.0	33.5	554.9	31.6	465.4	31.5	367.4
34.0	568.8	32.7	513.3								

Table A5. Details of the individual hauls sampled in the study.

Fishing base: Port Sud Est	Date: 15-Mar	No. fishers : 21	No. boats : 7	Duration of fishing day : 8 ^h 20'
Haul time: 10^m	Long: 63°28.994' Lat: 19°44.550'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	54	51.8		
<i>Anampses caeruleopunctatus</i>	2	0.6		
<i>Cheilinus trilobatus</i>	4	3.6		
<i>Hipposcarus harid</i>	1	1.8		
<i>Kyphosus cinerascens</i>	1	0.7		
<i>Lethrinus nebulosus</i>	57	15.6		
<i>Mulloidichthys flavolineatus</i>	1	0.3		
<i>Mulloidichthys vanicolensis</i>	1	0.3		
<i>Naso unicornis</i>	2	0.3		
<i>Parupeneus barberinus</i>	1	0.3		
<i>Scarus sordidus</i>	1	0.3		
<i>Siganus sutor</i>	40	13.78		
Total	165	89.2		
Haul time: 14^m	Long: 63°29.051' Lat: 19°44.538'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	23	21.4		
<i>Acanthurus triostegus</i>	86	8.8		
<i>Cheilinus trilobatus</i>	3	3.7		
<i>Gerres longirostris</i>	1	0.1		
<i>Hipposcarus harid</i>	3	0.8		
<i>Lethrinus mahsena</i>	2	0.5		
<i>Lethrinus nebulosus</i>	37	11.2		
<i>Mulloidichthys vanicolensis</i>	3	1.0		
<i>Naso unicornis</i>	4	2.4		
<i>Scarus sordidus</i>	3	0.9		
<i>Siganus argenteus</i>	3	0.8		
<i>Siganus sutor</i>	52	16.8		
<i>Thalassoma quinquevittatum</i>	1	0.3		
Total	197	68.7		
Haul time: 10^m	Long: 63°29.118' Lat: 19°44.333'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	51	39.1		
<i>Acanthurus triostegus</i>	12	1.4		
<i>Cheilio inermis</i>	1	0.2		
<i>Cheilinus trilobatus</i>	2	2.6		
<i>Lethrinus mahsena</i>	1	0.2		
<i>Lethrinus nebulosus</i>	6	1.7		
<i>Scarus sordidus</i>	3	1.0		
<i>Siganus sutor</i>	5	1.3		
Total	81	47.5		
Haul time: 10^m	Long: 63°27.118' Lat: 19°45.459'			
Species	No. individuals	Weight (kg)		
<i>No fish caught</i>	0	0		
Total	0	0		
Haul time: 2^m	Long: 63°26.928' Lat: 19°45.274'			
Species	No. individuals	Weight (kg)		
<i>Calomatus carolinus</i>	1	0.8		
<i>Gerres longirostris</i>	7	2.9		
<i>Lethrinus nebulosus</i>	4	1.7		
<i>Siganus sutor</i>	1	0.4		
Total	13	5.8		
Haul time: 15^m	Long: 63°29.079' Lat: 19°44.450'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	196	138.4		
<i>Anampses caeruleopunctatus</i>	20	5.4		
<i>Acanthurus triostegus</i>	357	19.6		
<i>Chaetodon zanzibarensis</i>	1	0.1		
<i>Cheilinus trilobatus</i>	8	6.2		
<i>Coris aygula</i>	2	0.4		
<i>Gerres longirostris</i>	2	0.7		
<i>Lethrinus mahsena</i>	18	3.9		
<i>Lethrinus nebulosus</i>	9	2.3		
<i>Mulloidichthys flavolineatus</i>	6	1.8		
<i>Naso unicornis</i>	3	0.3		
<i>Parupeneus bifasciatus</i>	2	0.5		
<i>Scarus sordidus</i>	19	6.8		
<i>Siganus sutor</i>	140	5.2		
	Total	586	238.6	
Haul time: 10^m	Long: 63°29.098' Lat: 19°44.394'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	2	1.5		
<i>Acanthurus triostegus</i>	3	0.5		
<i>Anampses caeruleopunctatus</i>	6	1.7		
<i>Lethrinus mahsena</i>	8	1.6		
<i>Naso unicornis</i>	2	0.2		
<i>Rhinecanthus aculeatus</i>	2	0.6		
<i>Scarus sordidus</i>	3	0.9		
<i>Siganus sutor</i>	23	8.3		
Total	49	14.6		
Haul time: 10^m	Long: 63°28.734' Lat: 19°45.045'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	5	3.7		
<i>Acanthurus triostegus</i>	2	0.2		
<i>Anampses caeruleopunctatus</i>	2	0.7		
<i>Caranx melampygus</i>	1	0.4		
<i>Lethrinus nebulosus</i>	2	0.4		
<i>Naso tuberosus</i>	1	4.9		
<i>Siganus sutor</i>	13	5.0		
Total	26	14.4		
Haul time: 10^m	Long: 63°28.734' Lat: 19°45.045'			
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp.</i>	27	18.0		
<i>Caranx melampygus</i>	3	2.0		
<i>Cheilinus chlorourus</i>	1	0.4		
<i>Gerres longirostris</i>	1	0.4		
<i>Lethrinus nebulosus</i>	2	0.8		
<i>Parupeneus barberinus</i>	2	0.7		
<i>Scarus sordidus</i>	3	1.5		
<i>Siganus sutor</i>	4	1.5		
Total	44	25.3		
Haul time: 10^m	Long: 63°27.015' Lat: 19°44.796'			
Species	No. individuals	Weight (kg)		
<i>No fish caught</i>	0	0		
Total	0	0		

Fishing base: Baie du Nord Date: 21-Mar No. fishers : 27			No. boats : 7 Duration of fishing day : 6 ^h 45 ^m		
Haul time: 15^m Long: 63°20.832' Lat: 19°42.792'			Haul time: 15^m Long: 63°20.157' Lat: 19°43.153'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Caranx papuensis</i>	36	27.6	<i>Caranx papuensis</i>	34	41.4
<i>Lethrinus nebulosus</i>	1	0.2	<i>Caranx melampygus</i>	2	1.3
<i>Scarus ghoban</i>	1	0.4	<i>Gerres longirostris</i>	9	2.4
<i>Siganus sutor</i>	1	0.5	<i>Monodactylus argenteus</i>	1	0.4
<i>Upeneus vittatus</i>	2	0.9	<i>Scarus ghoban</i>	2	0.5
<i>Valamugil seholi</i>	2	2.3	<i>Siganus sutor</i>	1	0.7
Total	43	31.9	<i>Valamugil seholi</i>	4	3.2
Total	53	49.9			
Haul time: 12^m Long: 63°19.950' Lat: 19°43.434'			Haul time: 19^m Long: 63°19.610' Lat: 19°44.080'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
No fish caught	0	0	No fish caught	0	0
Total	0	0	Total	0	0
Haul time: 20^m Long: 63°18.697' Lat: 19°43.420'			Haul time: 15^m Long: 63°18.029' Lat: 19°43.700'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Acanthurus spp</i>	1	2.2	No fish caught	0	0
<i>Albula glossodonta</i>	1	1.7	Total	0	0
<i>Caranx melampygus</i>	3	0.7			
<i>Caranx papuensis</i>	6	5.6	Haul time: 30^m Long: 63°17.928' Lat: 19°45.417'		
<i>Gerres longirostris</i>	10	2.9	Species	No. individuals	Weight (kg)
<i>Lethrinus nebulosus</i>	8	4.1	No fish caught	0	0
<i>Scomberoides lysan</i>	2	1.8	Total	0	0
<i>Upeneus vittatus</i>	1	0.6			
<i>Valamugil seholi</i>	4	4.0	Haul time: 25^m Long: 63°17.857' Lat: 19°45.318'		
Total	36	23.6	Species	No. individuals	Weight (kg)
			No fish caught	0	0
			Total	0	0
Fishing base: Port Sud Est Date: 31-Mar No. fishers : 21			No. boats : 7 Duration of fishing day : 9 ^h 15 ^m		
Haul time: 14^m Long: 63°28.658' Lat: 19°44.767'			Haul time: 15^m Long: 63°28.958 Lat: 19°44.728'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Acanthurus triostegus</i>	1	0.1	<i>Acanthurus triostegus</i>	25	3.0
<i>Gerres longirostris</i>	3	0.9	<i>Gerres longirostris</i>	6	2.0
<i>Lethrinus nebulosus</i>	40	13.8	<i>Lethrinus mahsena</i>	2	0.5
<i>Mulloidichthys flavolineatus</i>	1	0.8	<i>Lethrinus nebulosus</i>	24	8.7
<i>Parupeneus rubescens</i>	2	0.5	<i>Mulloidichthys flavolineatus</i>	2	0.9
<i>Scarus spp.</i>	6	1.3	<i>Naso tuberosus</i>	3	7.5
<i>Siganus sutor</i>	23	9.1	<i>Naso unicornis</i>	3	2.4
Total	76	26.6	<i>Scarus ghoban</i>	1	2.4
Haul time: 23^m Long: 63°28.910' Lat: 19°44.804'			<i>Scarus sordidus</i>	1	0.4
Species	No. individuals	Weight (kg)	<i>Siganus argenteus</i>	4	1.0
<i>Gerres longirostris</i>	1	0.3	<i>Siganus sutor</i>	5	2.2
<i>Hemigymnus fasciatus</i>	2	0.7	Total	76	31.0
<i>Lethrinus nebulosus</i>	4	1.6			
<i>Naso tuberosus</i>	4	14.6	Haul time: 25^m Long: 63°29.058' Lat: 19°44.698'		
<i>Naso unicornis</i>	8	9.1	Species	No. individuals	Weight (kg)
<i>Siganus sutor</i>	1	0.3	<i>Gerres longirostris</i>	3	0.8
Total	21	26.7	<i>Lethrinus nebulosus</i>	1	0.4
Haul time: 10^m Long: 63°28.902' Lat: 19°44.628'			<i>Scarus spp.</i>	8	1.1
Species	No. individuals	Weight (kg)	<i>Siganus sutor</i>	1	0.2
<i>Caranx melampygus</i>	1	0.4	Total	13	2.4
<i>Lethrinus mahsena</i>	1	0.2			
<i>Lethrinus nebulosus</i>	15	4.7	Haul time: 15^m Long: 63°29.286' Lat: 19°44.043'		
<i>Naso tuberosus</i>	1	1.6	Species	No. individuals	Weight (kg)
<i>Naso unicornis</i>	1	1.5	No fish caught	0	0
<i>Siganus sutor</i>	9	3.8	Total	0	0
Total	29	12.3			
Haul time: 12^m Long: 63°29.819' Lat: 19°43.319'			Haul time: 12^m Long: 63°29.547' Lat: 19°43.548'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
No fish caught	0	0	No fish caught	0	0
Total	0	0	Total	0	0
Haul time: 10^m Long: 63°29.471' Lat: 19°43.770'					
Species	No. individuals	Weight (kg)	Haul time: 6^m Long: 63°29.558' Lat: 19°43.681'		
<i>Lethrinus mahsena</i>	9	1.8	Species	No. individuals	Weight (kg)
<i>Lethrinus nebulosus</i>	8	3.1	<i>Acanthurus triostegus</i>	2	0.3
<i>Siganus sutor</i>	40	13.9	<i>Anampsese meleagrides</i>	1	0.2
Total	57	18.8	<i>Lethrinus mahsena</i>	12	2.7
Haul time: 5^m Long: 63°29.171' Lat: 19°44.251'			<i>Parupeneus rubescens</i>	1	0.3
			<i>Siganus sutor</i>	11	3.8
			Total	28	7.2
			Haul time: 15^m Long: 63°29.393' Lat: 19°43.435'		
			Species	No. individuals	Weight (kg)

Species	No. individuals	Weight (kg)	No fish caught	0	0
			Total	0	0
Acanthurus triostegus	2	0.2	Haul time: 20^m Long: 63°28.921' Lat: 19°44.514'		
Lethrinus mahsena	7	1.8	Species	No. individuals	Weight (kg)
Mulloidichthys flavolineatus	1	0.3	No fish caught	0	0
Siganus sutor	11	3.6	Total	0	0
Total	21	5.9	Haul time: 10^m Long: 63°28.915' Lat: 19°44.510'		
Haul time: 20^m Long: 63°28.921' Lat: 19°44.514'			Species	No. individuals	Weight (kg)
Species	No. individuals	Weight (kg)	Acanthurus triostegus	11	2.0
Lethrinus nebulosus	22	9.0	Caranx melampygus	1	0.7
Naso unicornis	2	4.2	Lethrinus nebulosus	54	23.8
Scarus ghoban	1	0.3	Scarus spp.	2	0.2
Scarus spp.	1	0.1	Siganus argenteus	2	0.6
Siganus sutor	11	4.7	Siganus sutor	12	4.5
Total	37	18.5	Total	82	31.9
Haul time: 10^m Long: 63°28.700' Lat: 19°44.731'			Haul time: 4^m Long: 63°28.776' Lat: 19°44.649'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
Acanthus triostegus	1	0.1	Acanthurus nigricans	1	0.1
Lethrinus nebulosus	2	0.8	Acanthurus triostegus	1	0.3
Scarus spp.	1	0.1	Caranx melampygus	2	
Siganus argenteus	2	0.6	Lethrinus nebulosus	20	7.6
Siganus sutor	5	1.6	Parupeneus barberinus	1	0.3
Total	11	3.3	Rhinecanthus aculeatus	1	0.3
Haul time: 10^m Long: 63°28.700' Lat: 19°44.731'			Scarus spp.	8	1.1
Species	No. individuals	Weight (kg)	Siganus argenteus	1	0.3
No fish caught	0	0	Siganus sutor	27	9.7
Total	0	0	Total	62	20.6

Fishing base: Baie du Nord	Date: 13-Apr	No. fishers : 25	No. boats : 7	Duration of fishing day : 11 ^h 10 ^m
Haul time: 41^m Long: 63°21.803' Lat: 19°41.137'			Haul time: 30^m Long: 63°21.803' Lat: 19°40.915	
Species	No. individuals	Weight (kg)	Species	No. individuals
Caranx melampygus	5	1.6	Caranx melampygus	72
Gerres longirostris	29	4.5	Fistularia commersonii	1
Hemiramphus far	2	0.2	Gerres longirostris	12
Lethrinus nebulosus	39	4.2	Lethrinus nebulosus	59
Mulloidichthys flavolineatus	3	0.6	Lutjanus fulvus	1
Siganus sutor	46	19.5	Siganus sutor	41
Upeneus vittatus	2	0.8	Sphyraeno jello	10
Total	127	31.5	Tylosaurus crocodilus	1
Haul time: 29^m Long: 63°21.804' Lat: 19°40.636'			Upeneus vittatus	49
Species	No. individuals	Weight (kg)	Total	233
Caranx melampygus	23	2.0	Total	74.1
Fistularia commersonii	3	0.7	Haul time: 35^m Long: 63°21.624' Lat: 19°40.422'	
Gerres longirostris	6	0.8	Species	No. individuals
Hemiramphus far	1	0.2	Caranx melampygus	5
Lethrinus nebulosus	6	0.8	Gerres longirostris	7
Siganus sutor	7	0.8	Hemiramphus far	1
Upeneus vittatus	107	36.8	Lethrinus nebulosus	3
Total	153	42.0	Siganus sutor	24
Haul time: 23^m Long: Lat:			Tylosaurus crocodilus	2
Species	No. individuals	Weight (kg)	Upeneus vittatus	4
Acanthurus triostegus	6	0.6	Total	46
Caranx melampygus	27	7.2	Haul time: 34^m Long: 63°18.271' Lat: 19°40.796'	
Fistularia commersonii	1	0.2	Species	No. individuals
Gerres longirostris	70	16.6	Caranx melampygus	20
Hemiramphus far	18	3.7	Caranx papuensis	1
Lethrinus harak	12	6.0	Coris aygula	1
Lethrinus nebulosus	1	0.1	Gerres longirostris	12
Siganus sutor	17	7.4	Kyphosus cinerascens	2
Tylosaurus crocodilus	2	2.7	Lethrinus harak	4
Upeneus vittatus	4	1.4	Lethrinus nebulosus	40
Total	158	45.8	Mulloidichthys flavolineatus	3
Haul time: 25^m Long: 63°18.724' Lat: 19°40.081'			Naso unicornis	125
Species	No. individuals	Weight (kg)	Scarus ghoban	13
Acanthurus spp	1	0.8	Scarus psittacus	1
Acanthurus triostegus	2	0.2	Siganus argenteus	4
Caranx melampygus	3	2.7	Siganus sutor	2
Lethrinus nebulosus	35	16.5	Total	228
Lethrinus xanthochilus	1	0.5	Haul time: 19^m Long: 63°18.891' Lat: 19°39.996'	
Species	No. individuals	Weight (kg)	Species	No. individuals

<i>Mulloidichthys flavolineatus</i>	1	0.1	<i>Acanthurus triostegus</i>	9	0.8
<i>Naso unicornis</i>	9	14.2	<i>Gerres longirostris</i>	1	0.4
<i>Scarus ghoban</i>	1	1.5	<i>Lethrinus harak</i>	22	8.3
<i>Siganus sutor</i>	9	7.5	<i>Lethrinus nebulosus</i>	108	58.3
Total	64	40.5	<i>Lethrinus xanthochilus</i>	7	3.8
Haul time: 24^m	Long: No GPS	Lat: No GPS	<i>Mulloidichthys flavolineatus</i>	1	0.4
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Naso unicornis</i>	3	4.8
<i>Acanthurus triostegus</i>	1	0.1	<i>Scarus ghoban</i>	1	0.9
<i>Caranx malempygus</i>	4	2.3	<i>Scarus psittacus</i>	1	0.2
<i>Gerres longirostris</i>	4	1.7	<i>Siganus argenteus</i>	1	0.3
<i>Lethrinus mahsena</i>	1	0.2	<i>Siganus sutor</i>	11	5.5
<i>Lethrinus nebulosus</i>	78	48.6	Total	165	83.7
<i>Lethrinus xanthochilus</i>	4		Haul time: 16^m	Long: 63°18.271'	Lat: 19°40.091'
<i>Naso unicornis</i>	5	4.1	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Scarus ghoban</i>	4	6.1	<i>No fish caught</i>	0	0
<i>Scarus sordidus</i>	1	0.2	Total	0	0
<i>Scomberoides lysan</i>	2	4.1			
<i>Siganus sutor</i>	1	0.7			
Total	105	70.2			

Fishing base: Pointe l'Aigle		Date: 15-Apr	No. fishers : 22	No. boats : 7	Duration of fishing day : 8^b05^m
Haul time: 5^m	Long: 63°24.470'	Lat: 19°40.164'		Haul time: 5^m	Long: 63°24.115
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>		<i>Species</i>	<i>No. individuals</i>
<i>No fish caught</i>	0	0		<i>Caranx melampygus</i>	3
Total	0	0		<i>Naso unicornis</i>	97
Haul time: 9^m	Long: 63°24.024'	Lat: 19°39.322'		<i>Scarus ghoban</i>	3
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>		<i>Siganus sutor</i>	5
<i>Cheilinus trilobatus</i>	1	0.4		Total	108
<i>Naso unicornis</i>	61	24.5		46.6	
<i>Scarus ghoban</i>	6	7.9		Haul time: 4^m	Long: 63°23.920'
<i>Siganus sutor</i>	4	1.3		<i>Species</i>	<i>No. individuals</i>
Total	72	34.0		<i>Caranx melampygus</i>	2
Haul time: 7^m	Long: 63°23.712'	Lat: 19°39.260'		<i>Cheilinus trilobatus</i>	1
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>		<i>Naso unicornis</i>	49
<i>Naso unicornis</i>	17	11.2		<i>Scarus sordidus</i>	3
<i>Scarus viridifucatus</i>	2	2.3		<i>Siganus sutor</i>	1
Total	19	13.5		Total	56
Haul time: 7^m	Long: 63°23.482'	Lat: 19°39.239'		31.0	
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>		Haul time: 6^m	Long: 63°23.566'
<i>Naso unicornis</i>	20	12.7		<i>Species</i>	<i>No. individuals</i>
<i>Scarus viridifucatus</i>	1	0.5		<i>Acanthurus triostegus</i>	1
Total	21	13.2		<i>Bolbometopon muricatum</i>	1
Haul time: 46^m	Long: 63°0.826'	Lat: 19°41.028'		<i>Gerres longirostris</i>	2
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>		<i>Lethrinus harak</i>	1
<i>Caranx melampygus</i>	37	18.4		<i>Lethrinus nebulosus</i>	4
<i>Gerres longirostris</i>	10	3.2		<i>Naso unicornis</i>	97
<i>Rhabdosargus sarba</i>	1	4.1		<i>Scarus scaber</i>	6
<i>Sphyraeno jello</i>	1	0.5		<i>Scarus sordidus</i>	12
<i>Valamugil seheli</i>	16	15.7		<i>Scarus viridifucatus</i>	5
Total	65	41.8		<i>Siganus sutor</i>	9
				Total	138
				75.0	
				Haul time: 39^m	Long: 63°22.984'
				<i>Species</i>	<i>No. individuals</i>
				<i>No fish caught</i>	0
				Total	0
				0	0

Fishing base: Pointe L'Aigle		Date: 18-Apr	No. fishers : 23	No. boats : 7	Duration of fishing day : 10^b28^m
Haul time: 60^m	Long: 63°20.949	Lat: 19°40.978		Haul time: 51^m	Long: 63°20.772
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>		<i>Species</i>	<i>No. individuals</i>
<i>Caranx melampygus</i>	1	0.3		<i>Caranx melampygus</i>	75
<i>Gerres longirostris</i>	11	3.3		<i>Gerres longirostris</i>	9
<i>Lethrinus nebulosus</i>	1	0.2		<i>Lethrinus nebulosus</i>	3
<i>Valamugil seheli</i>	215	186.3		<i>Valamugil seheli</i>	321
Total	228	190.1		Total	408
Haul time: 45^m	Long: 63°203.576'	Lat: 19°40.726		314.3	
<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>			
<i>No fish caught</i>	0	0			
Total	0	0			

Fishing base: Port Sud Est		Date: 20-Apr	No. fishers : 18	No. boats : 6	Duration of fishing day : 7 ^h
Haul time: 50^m	Long: 63°25.938'	Lat: 19°48.177	Species	No. individuals	Weight (kg)
Acanthurus triostegus	8	1.2	Gerres longirostris	4	1.8
Naso unicornis	17	16.9	Mulloidichthys vanicolensis	9	2.0
Novaculichthys taenianus	1		Scarus ghoban	1	1.4
Scarus ghoban	1	2.5	Scarus sordidus	1	0.7
Total	27	20.5	Siganus sutor	7	2.3
Haul time: 11^m	Long: 63°25.977'	Lat: 19°47.824'		Total	22
Species	No. individuals	Weight (kg)			8.2
Caranx melampygus	3	1.3	Haul time: 11^m	Long: 63°25.977'	Lat: 19°47.824'
Gerres longirostris	8	3.8	Species	No. individuals	Weight (kg)
Lethrinus nebulosus	8	4.1	Caranx melampygus	3	1.8
Mulloidichthys flavolineatus	1	0.3	Gerres longirostris	17	9.5
Naso unicornis	1	0.5	Lethrinus mahsena	8	2.1
Novaculichthys taenianus	1		Lethrinus nebulosus	38	18.8
Rhinecanthus aculeatus	1	0.1	Naso tuberosus	1	3.6
Scarus ghoban	1	0.2	Scarus ghoban	1	1.5
Siganus argenteus	4	1.3	Siganus argenteus	2	0.7
Siganus sutor	8	3.2	Siganus sutor	30	12.4
Total	36	14.6	Total	100	50.4
Haul time: 12^m	Long: 63°26.030'	Lat: 19°47.649'	Haul time: 8^m	Long: 63°25.997'	Lat: 19°47.456'
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
No fish caught	0	0	Acanthurus triostegus	1	0.2
Total	0	0	Caranx melampygus	2	0.7
Haul time: 9^m	Long: 63°26.285'	Lat: 19°47.014'	Parupeneus barberinus	1	0.3
Species	No. individuals	Weight (kg)	Siganus sutor	19	8
Acanthurus triostegus	39	6.1	Total	23	9.3
Gerres longirostris	18	8.3	Haul time: 7^m	Long: 63°26.202'	Lat: 19°47.114'
Lethrinus nebulosus	3	1.7	Species	No. individuals	Weight (kg)
Siganus argenteus	1	0.4	Acanthurus triostegus	1	0.1
Siganus sutor	22	8.1	Caranx melampygus	1	0.7
Total	83	24.5	Gerres longirostris	4	1.3
Haul time: 7^m	Long: 63°26.358'	Lat: 19°46.901'	Lethrinus nebulosus	3	1.6
Species	No. individuals	Weight (kg)	Rhinecanthus aculeatus	1	0.1
Acanthurus triostegus	8	1.0	Siganus sutor	14	5.4
Gerres longirostris	1	0.4	Total	24	9.2
Lethrinus nebulosus	2	0.8			
Siganus sutor	4	1.8			
Total	15	4.1			

Fishing base: Baie du Nord		Date: 17-May	No. fishers : 21	No. boats : 7	Duration of fishing day : 8 ^h 32 ^m
Haul time: 21m	Long: 63°21.448'	Lat: 19°39.791'	Haul time: 25m	Long: 63°21.475'	Lat: 19°39.489'
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
No fish caught	0	0	Acanthurus spp.	1	1.0
Total	0	0	Acanthurus triostegus	79	8.1
Haul time: 14m	Long: 63°21.726'	Lat: 19°39.503'	Anampsese caeruleopunctatus	4	0.9
Species	No. individuals	Weight (kg)	Arothron stellatus	1	2.8
Acanthurus spp.	1	1.0	Caranx melampygus	41	7.7
Acanthurus triostegus	3	0.3	Cheilinus trilobatus	3	0.9
Anampsese caeruleopunctatus	1	0.5	Fistularia commersonii	1	0.3
Caranx melampygus	3	0.6	Gerres longirostris	28	6.2
Gerres longirostris	1	0.3	Lethrinus xanthochilus	1	1.4
Hemiramphus far	25	4.6	Rhinecanthus aculeatus	3	0.6
Lethrinus harak	2	0.7	Scomberoides lysan	2	2.0
Rhinecanthus aculeatus	4	0.9	Siganus argenteus	2	0.4
Siganus sutor	139	44.4	Siganus sutor	79	26.7
Total	179	53.2	Total	245	59.0
Haul time: 20m	Long: 63°21.909'	Lat: 19°39.605'	Haul time: 16m	Long: 63°22.254'	Lat: 19°39.565'
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
Acanthurus triostegus	13	1.3	No fish caught	0	0
Hemiramphus far	2	0.4	Total	0	0
Lethrinus nebulosus	2	0.7	Haul time: 17m	Long: 63°20.399'	Lat: 19°39.601'
Siganus sutor	38	13.0	Species	No. individuals	Weight (kg)
Total	55	15.4	Acanthurus triostegus	13	1.6
Haul time: 13m	Long: 63°20.394'	Lat: 19°39.605'	Caranx melampygus	2	0.2
Species	No. individuals	Weight (kg)	Cheilinus trilobatus	1	0.3
No fish caught	0	0	Gerres longirostris	7	2.1

Total	0	0		
Haul time: 11m	Long: 63°20.523'	Lat: 19°39.571'		
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	5	0.7		
<i>Caranx melampygus</i>	2	0.2		
<i>Gerres longirostris</i>	14	3.2		
<i>Scomberoides lyasan</i>	1	0.6		
<i>Siganus sutor</i>	24	8.8		
Total	46	13.5		
Haul time: 14m	Long: 63°20.639'	Lat: 19°39.689'		
Species	No. individuals	Weight (kg)		
No fish caught	0	0		
Total	0	0		
			Total	127
				30.8
			Haul time: 13m	Long: 63°20.782'
				Lat: 19°39.745'
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	8	1.1		
<i>Caranx melampygus</i>	10	1.5		
<i>Gerres longirostris</i>	29	7.4		
<i>Hemiramphus far</i>	2	0.4		
<i>Lethrinus harak</i>	2	0.9		
<i>Siganus sutor</i>	55	19.8		
Total	106	31.1		

Fishing base: Pointe L'Aigle Date: 18-May No. fishers : 23 No. boats : 7 Duration of fishing day : 4^h				
Haul time: 14m	Long: 63°24.582'	Lat: 19°40.442'		
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	5	0.5		
<i>Gerres longirostris</i>	5	1.9		
<i>Siganus sutor</i>	22	10.0		
Total	32	12.4		
Haul time: 17m	Long: 63°24.333'	Lat: 19°40.178'		
Species	No. individuals	Weight (kg)		
<i>Cheilinus trilobatus</i>	1	0.4		
<i>Siganus sutor</i>	2	0.2		
Total	3	0.6		
Haul time: 8m	Long: 63°23.777'	Lat: 19°39.832'		
Species	No. individuals	Weight (kg)		
<i>Gerres longirostris</i>	6	1.4		
<i>Rhinecanthus aculeatus</i>	1	0.2		
Total	7	1.6		
			Haul time: 15m	Long: 63°24.506'
				Lat: 19°40.317'
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	8	1.0		
<i>Lethrinus harak</i>	1	0.9		
<i>Siganus sutor</i>	84	24.0		
Total	93	25.9		
Haul time: 12m	Long: 63°24.226'	Lat: 19°40.003'		
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	6	0.7		
<i>Gerres longirostris</i>	3	0.9		
<i>Lethrinus harak</i>	2	1.9		
<i>Siganus sutor</i>	28	4.6		
Total	39	8.2		
Haul time: 20m	Long: 63°23.948'	Lat: 19°39.790'		
Species	No. individuals	Weight (kg)		
No fish caught	0	0		
Total	0	0		

Fishing base: Pointe Corail Date: 28-Apr No. fishers : 27 No. boats : 7 Duration of fishing day : 6^{h22^m}				
Haul time: 14^m	Long: 63°24.565'	Lat: 19°47.565'		
Species	No. individuals	Weight (kg)		
<i>Acanthurus spp</i>	1	2.2		
<i>Caranx melampygus</i>	5	0.8		
<i>Gerres longirostris</i>	10	2.1		
<i>Mulloidichthys flavolineatus</i>	1	0.4		
<i>Scarus spp.</i>	1	0.3		
<i>Siganus sutor</i>	73	32.3		
Total	91	38.2		
Haul time: 9m	Long: 63°24.673'	Lat: 19°48.177'		
Species	No. individuals	Weight (kg)		
<i>Gerres longirostris</i>	5	2.3		
<i>Lethrinus nebulosus</i>	10	5.5		
Total	15	7.8		
Haul time: 12m	Long: 63°24.358'	Lat: 19°48.259'		
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	10	1.2		
<i>Caranx melampygus</i>	10	4.7		
<i>Gerres longirostris</i>	11	3.1		
<i>Lethrinus nebulosus</i>	9	3.4		
<i>Mulloidichthys flavolineatus</i>	36	8.9		
<i>Scarus sordidus</i>	1	0.2		
<i>Siganus sutor</i>	6	2.3		
Total	83	24.0		
Haul time: 13m	Long: 63°24.697'	Lat: 19°48.429'		
Species	No. individuals	Weight (kg)		
<i>Caranx melampygus</i>	1	0.3		
<i>Gerres longirostris</i>	1	0.2		
<i>Lethrinus nebulosus</i>	9	4.4		
<i>Mulloidichthys flavolineatus</i>	3	0.7		
<i>Scarus sordidus</i>	1	0.1		
<i>Siganus sutor</i>	3	1.3		
Total	18	7.8		
Haul time: 15m	Long: 63°25.141'	Lat: 19°48.297'		
			Haul time: 18m	Long: 63°24.741'
				Lat: 19°48.040'
Species	No. individuals	Weight (kg)		
<i>Gerres longirostris</i>	1	0.3		
<i>Siganus sutor</i>	13	5.0		
Total	14	5.3		
Haul time: 19m	Long: 63°24.802'	Lat: 19°48.052'		
Species	No. individuals	Weight (kg)		
<i>Gerres longirostris</i>	9	1.7		
Total	9	1.7		
Haul time: 11m	Long: 63°24.500'	Lat: 19°48.165'		
Species	No. individuals	Weight (kg)		
<i>Gerres longirostris</i>	3	1.1		
<i>Lethrinus nebulosus</i>	9	3.6		
<i>Mulloidichthys flavolineatus</i>	5	1.2		
Total	17	6.0		
Haul time: 15m	Long: 63°24.587'	Lat: 19°48.476'		
Species	No. individuals	Weight (kg)		
<i>Caranx melampygus</i>	8	4.0		
<i>Gerres longirostris</i>	11	3.6		
<i>Lethrinus nebulosus</i>	28	11.9		
<i>Mulloidichthys flavolineatus</i>	6	1.6		
<i>Siganus sutor</i>	9	2.8		
Total	62	23.9		
Haul time: 14m	Long: 63°24.868'	Lat: 19°48.345'		
Species	No. individuals	Weight (kg)		
<i>Acanthurus triostegus</i>	1	0.1		
<i>Carangoides orthogrammus</i>	2	1.0		
<i>Gerres longirostris</i>	26	8.9		
<i>Hippocampus harid</i>	1	0.4		
<i>Lethrinus nebulosus</i>		0.4		
<i>Mulloidichthys flavolineatus</i>	2	0.5		
<i>Siganus sutor</i>	9	3.2		
<i>Tylosurus crocodiles</i>	1	0.6		
Total	46	15.0		

Species	No. individuals	Weight (kg)	Haul time:20m	Long:63°25.400'	Lat:19°49.159'
<i>Acanthurus spp.</i>	7	4.1	<i>Caranx melampygus</i>	3	5.3
<i>Acanthurus triostegus</i>	10	1.4	<i>Lethrinus nebulosus</i>	26	18.8
<i>Caranx melampygus</i>	18	6.6	<i>Naso unicornis</i>	3	2.5
<i>Gerres longirostris</i>	18	5.7	<i>Scarus ghoban</i>	7	13.4
<i>Hipposcarus harid</i>	1	0.2	<i>Scarus sordidus</i>	4	1.9
<i>Lethrinus harak</i>	1	0.5	<i>Scomberoides lysan</i>	1	1.9
<i>Lethrinus nebulosus</i>	17	7.2	Total	44	43.7
<i>Mulloidichthys flavolineatus</i>	38	8.12	 	 	
<i>Naso unicornis</i>	1	0.5	 	 	
<i>Scarus ghoban</i>	4	4.5	 	 	
<i>Scarus psittacus</i>	3	0.7	 	 	
<i>Siganus sutor</i>	20	9.5	 	 	
<i>Tylosaurus crocodilus</i>	1	0.9	 	 	
Total	139	49.7	 	 	

Species	No. individuals	Weight (kg)	Haul time:11m	Long:63°28.808'	Lat:19°40.543'
<i>Acanthurus spp.</i>	2	4.4	<i>Caranx melampygus</i>	3	0.3
<i>Acanthurus triostegus</i>	171	26.0	<i>Caranx melampygus</i>	1	0.2
<i>Caranx melampygus</i>	7	3.3	<i>Gerres longirostris</i>	5	1.0
<i>Gerres longirostris</i>	2	0.7	<i>Lethrinus harak</i>	3	1.9
<i>Hipposcarus harid</i>	1	0.3	<i>Parupeneus barberinus</i>	2	0.7
<i>Lethrinus nebulosus</i>	19	7.9	<i>Scarus sordidus</i>	6	3.7
<i>Parupeneus barberinus</i>	1	0.1	<i>Siganus argenteus</i>	5	1.0
<i>Scarus ghoban</i>	6	12.8	<i>Siganus sutor</i>	11	3.7
<i>Scarus sordidus</i>	5	1.5	Total	230	61.6
<i>Siganus argenteus</i>	5	1.0	 	 	
<i>Siganus sutor</i>	11	3.7	 	 	

Fishing base: Pointe L'Aigle Date: 2-May No. fishers : 22 No. boats : 7 Duration of fishing day : 5 ^h					
<i>Haul time:10m Long:63°26.820' Lat:19°41.130'</i>	<i>Haul time:11m Long:63°28.808' Lat:19°40.543'</i>				
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Acanthurus triostegus</i>	5	1.1	<i>Acanthurus triostegus</i>	3	0.3
<i>Caranx melampygus</i>	3	1.5	<i>Caranx melampygus</i>	1	0.2
<i>Gerres longirostris</i>	2	0.4	<i>Gerres longirostris</i>	5	1.0
<i>Mulloidichthys flavolineatus</i>	5	1.8	<i>Lethrinus harak</i>	3	1.9
<i>Siganus sutor</i>	5	0.6	<i>Parupeneus barberinus</i>	2	0.7
<i>Upeneus vittatus</i>	6	2.6	<i>Scarus sordidus</i>	6	3.7
Total	26	8.0	<i>Siganus argenteus</i>	5	1.2
<i>Haul time:6m Long:63°28.945' Lat:19°40.575'</i>			<i>Siganus sutor</i>	84	33.9
Species	No. individuals	Weight (kg)	Total	109	42.9
<i>Acanthurus triostegus</i>	16	1.9	<i>Haul time:15m Long:63°29.088' Lat:19°40.687'</i>		
<i>Anampsese caeruleopunctatus</i>	10	3.0	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Caranx melampygus</i>	4	0.5	<i>Acanthurus triostegus</i>	10	1.2
<i>Cheilinus trilobatus</i>	2	1.2	<i>Anampsese caeruleopunctatus</i>	9	3.4
<i>Lethrinus nebulosus</i>	1	0.4	<i>Mulloidichthys flavolineatus</i>	1	0.2
<i>Mulloidichthys flavolineatus</i>	2	0.5	<i>Rhinecanthus aculeatus</i>	1	0.3
<i>Parupeneus barberinus</i>	2	0.8	<i>Scarus sordidus</i>	1	0.4
<i>Scarus sordidus</i>	2	1.1	<i>Siganus sutor</i>	89	35.0
<i>Siganus sutor</i>	113	47.8	Total	111	40.5
Total	152	57.2	<i>Haul time:6m Long:63°28.238' Lat:19°40.296'</i>		
Species	No. individuals	Weight (kg)	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Anampsese caeruleopunctatus</i>	3	0.9	<i>Acanthurus spp.</i>	3	2.6
<i>Rhinecanthus aculeatus</i>	3	0.9	<i>Acanthurus triostegus</i>	5	0.7
<i>Siganus argenteus</i>	3	0.7	<i>Anampsese caeruleopunctatus</i>	4	1.5
<i>Siganus sutor</i>	32	12.3	<i>Cheilinus trilobatus</i>	2	1.2
Total	41	14.7	<i>Gomphosus caerulatus</i>	1	0.2
<i>Haul time:10m Long:63°27.752' Lat:19°40.149'</i>			<i>Lethrinus nebulosus</i>	1	0.2
Species	No. individuals	Weight (kg)	<i>Parupeneus barberinus</i>	4	1.3
<i>No fish caught</i>	0	0	<i>Rhinecanthus aculeatus</i>	3	0.7
Total	0	0	<i>Scarus ghoban</i>	3	0.8
<i>Haul time:12m Long:63°27.615' Lat:19°40.152'</i>			<i>Scarus sordidus</i>	6	2.2
Species	No. individuals	Weight (kg)	<i>Siganus argenteus</i>	15	4.4
<i>No fish caught</i>	0	0	<i>Siganus sutor</i>	121	47.6
Total	0	0	Total	168	63.3

Fishing base: Port Sud Est Date: 3-May No. fishers : 16 No. boats : 5 Duration of fishing day : 7 ^h 45 ^m					
<i>Haul time:6m Long:63°27.839' Lat:19°45.759'</i>	<i>Haul time:8m Long:63°26.664' Lat:19°46.645'</i>				
Species	No. individuals	Weight (kg)	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Naso tuberosus</i>	1	3.0	<i>No fish caught</i>	0	0
<i>Naso unicornis</i>	18	25.8	Total	0	0
Total	19	28.8	<i>Haul time:5m Long:63°27.922' Lat:19°45.788'</i>		

<i>Haul time: 10m Long: 63°26.376' Lat: 19°47.679'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>No fish caught</i>		0	0	<i>Kyphosus cinerascens</i>	9	28.9
	Total	0	0	Total	9	28.9

Fishing base: Baie du Nord	Date: 4-May	No. fishers :	No. boats :	Duration of fishing day : 11 ^h		
<i>Haul time: 10m Long: 63°23.669' Lat: 19°42.845'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Haul time: 7m Long: 63°18.326' Lat: 19°40.697'</i>		
<i>Caranx melampygus</i>		2	0.7	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Leiognathus equulus</i>		15	3.0	<i>Elops machnata</i>	1	0.7
	Total	17	3.7	<i>Naso unicornis</i>	7	10.3
<i>Haul time: 11m Long: 63°18.825' Lat: 19°40.822'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	Total	8	11.0
<i>Gerres longirostris</i>		4	0.7	<i>Haul time: 15m Long: 63°18.488' Lat: 19°40.476'</i>		
<i>Mugil cephalus</i>		158	47.4	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
	Total	162	48.1	<i>Acanthurus triostegus</i>	1	0.1
<i>Haul time: 14m Long: 63°19.069' Lat: 19°39.773'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Caranx melampygus</i>	2	0.2
<i>No fish caught</i>		0	0	<i>Gerres longirostris</i>	14	4.5
	Total	0	0	<i>Lethrinus harak</i>	3	0.4
<i>Haul time: 15m Long: 63°19.189' Lat: 19°39.787'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Lethrinus nebulosus</i>	2	0.6
<i>Caranx melampygus</i>		4	2.0	<i>Scarus ghoban</i>	2	1.3
<i>Gerres longirostris</i>		22	4.3	<i>Siganus sutor</i>	24	7.2
<i>Gnathodentex aurolineatus</i>		1	0.2		Total	48
<i>Leiognathus equulus</i>		1	0.2	<i>Haul time: 34m Long: 63°20.650' Lat: 19°40.163'</i>		
<i>Lethrinus nebulosus</i>		20	7.0	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Mugil cephalus</i>		87	27.8	<i>Caranx melampygus</i>	2	0.2
<i>Mulloidichthys flavolineatus</i>		8	1.9	<i>Fistularia commersonii</i>	1	0.6
<i>Parupeneus ciliatus</i>		1	0.5	<i>Gerres longirostris</i>	52	13.7
<i>Rhinecanthus aculeatus</i>		1	0.2	<i>Lethrinus harak</i>	1	0.8
<i>Siganus sutor</i>		3	1.8	<i>Lethrinus nebulosus</i>	2	0.5
<i>Valamugil seheli</i>		1	0.9	<i>Monodactylus argenteus</i>	1	0.1
	Total	149	46.8	<i>Parupeneus barberinus</i>	1	0.2
<i>Haul time: 26m Long: 63°21.251' Lat: 19°40.598'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Siganus sutor</i>	4	1.6
<i>Gerres longirostris</i>		3	1.2		Total	64
<i>Lethrinus harak</i>		2	1.3	<i>Haul time: 28m Long: 63°20.791' Lat: 19°40.314'</i>		
<i>Rhabdosargus sarba</i>		1	3.7	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Siganus sutor</i>		1	0.7	<i>Caranx melampygus</i>	6	1.1
<i>Valamugil seheli</i>		3	2.5	<i>Gerres longirostris</i>	24	7.2
	Total	10	9.4	<i>Lethrinus harak</i>	1	0.2
<i>Haul time: 38m Long: 63°22.478' Lat: 19°40.868'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Lethrinus nebulosus</i>	1	0.2
<i>Elops machnata</i>		9	9.6	<i>Siganus sutor</i>	3	1.6
<i>Gerres longirostris</i>		1	0.2	<i>Tylosaurus crocodilus</i>	1	0.8
<i>Valamugil seheli</i>		28	3.2	<i>Valamugil seheli</i>	3	3.2
	Total	38	41.5		Total	39
						14.4

Fishing base: Pointe l'Aigle	Date: 14-Jun	No. fishers : 21	No. boats : 7	Duration of fishing day : 7 ^b 25 ^m		
<i>Haul time: 19m Long: 63°24.630' Lat: 19°40.401'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Haul time: 15m Long: 63°24.633' Lat: 19°40.400'</i>		
<i>Acanthrusu triostegus</i>		15	2.3	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Caranx melmapygus</i>		1	0.1	<i>Acanthurus triostegus</i>	3	0.4
<i>Lethrinus harak</i>		1	0.2	<i>Caranx melampygus</i>	2	0.2
<i>Lethrinus nebulosus</i>		1	0.2	<i>Siganus sutor</i>	46	10.1
<i>Siganus sutor</i>		27	7.8		Total	51
	Total	45	10.5	<i>Haul time: 14m Long: 63°21.414' Lat: 19°40.249'</i>		
<i>Haul time: 12m Long: 63°24.262' Lat: 19°40.165'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>No fish caught</i>		0	0	<i>Siganus sutor</i>	61	12.0
	Total	0	0		Total	61
				<i>Haul time: 15m Long: 63°24.213' Lat: 19°36.958'</i>		
<i>Haul time: 4m Long: 63°24.297' Lat: 19°39.964'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Siganus sutor</i>		87	14.5	<i>No fish caught</i>	0	0
	Total	87	14.5		Total	0
<i>Haul time: 9m Long: 63°23.822' Lat: 19°39.752'</i>	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>	<i>Haul time: 11m Long: 63°24.123' Lat: 19°39.972'</i>		
<i>No fish caught</i>		0	0	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
				<i>No fish caught</i>	0	0

Species	No. individuals	Weight (kg)	Total	0	0
No fish caught	0	0	Haul time:10m Long:63°24.009' Lat:19°39.840'		
Total	0	0	Species	No. individuals	Weight (kg)
Haul time:5m Long:63°23.654' Lat:19°39.778'			<i>Scarus sordidus</i>	1	0.2
Species	No. individuals	Weight (kg)	<i>Siganus sutor</i>	129	23.1
<i>Caranx melampygus</i>	1	0.1	Total	130	23.3
<i>Scarus sordidus</i>	1	0.2	Haul time:11m Long:63°23.678' Lat:19°39.759'		
<i>Siganus sutor</i>	41	6.7	Species	No. individuals	Weight (kg)
Total	43	7.0	<i>Siganus sutor</i>	197	43.4
Haul time:7m Long:63°23.463' Lat:19°39.956'			Total	197	43.4
Species	No. individuals	Weight (kg)	Haul time:2m Long:63°22.505' Lat:19°39.758'		
<i>Acanthurus triostegus</i>	1	0.1	Species	No. individuals	Weight (kg)
<i>Caranx melampygus</i>	2	0.2	<i>Caranx melampygus</i>	1	0.1
<i>Siganus sutor</i>	63	19.2	<i>Siganus sutor</i>	90	20.7
Total	66	19.5	Total	91	20.8
Haul time:6m Long:63°24.473' Lat:19°39.795'			Haul time:6m Long:63°24.473' Lat:19°39.795'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
No fish caught	0	0	No fish caught	0	0
Total	0	0	Total	0	0

Fishing base: Pointe Corail	Date: 22-Jun	No. fishers : 26	No. boats : 10	Duration of fishing day : 6 ^h 55 ^m																																																																																																										
Haul time:10m Long:63°20.811' Lat:19°49.543'			Haul time:12m Long:63°20.563' Lat:19°49.523'																																																																																																											
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)																																																																																																									
<i>Caranx melampygus</i>	5	1.9	<i>Caranx melampygus</i>	6	1.9																																																																																																									
<i>Mulloidichthys flavolineatus</i>	36	7.7	<i>Gerres longirostris</i>	5	1.2																																																																																																									
<i>Siganus sutor</i>	1	0.4	<i>Mulloidichthys flavolineatus</i>	1	0.3																																																																																																									
Total	42	10.0	<i>Siganus sutor</i>	6	2.3																																																																																																									
Haul time:9m Long:63°20.450' Lat:19°49.140'			Total	18	5.7																																																																																																									
Species	No. individuals	Weight (kg)	Haul time:12m Long:63°20.249' Lat:19°49.203'																																																																																																											
<i>Caranx melampygus</i>	4	1.7	Species	No. individuals	Weight (kg)																																																																																																									
<i>Caranoides orthogrammus</i>	2	2.2	<i>Calotomus carolinus</i>	1	0.4																																																																																																									
<i>Gerres longirostris</i>	6	2.0	<i>Caranx melampygus</i>	3	0.5																																																																																																									
<i>Scomberoides lysan</i>	1	0.9	<i>Gerres longirostris</i>	1	0.3																																																																																																									
<i>Siganus sutor</i>	2	1.0	<i>Mulloidichthys flavolineatus</i>	2	0.6																																																																																																									
Total	15	7.7	<i>Siganus sutor</i>	3	1.7																																																																																																									
Haul time:12m Long:63°20.296' Lat:19°48.785'			Total	10	3.5																																																																																																									
Species	No. individuals	Weight (kg)	Haul time:10m Long:63°20.820' Lat:19°49.709'																																																																																																											
<i>Caranx melampygus</i>	3	0.5	Species	No. individuals	Weight (kg)																																																																																																									
<i>Gerres longirostris</i>	11	3.1	<i>Acanthurus spp.</i>	4	5.3																																																																																																									
<i>Siganus sutor</i>	4	2.0	<i>Acanthurus triostegus</i>	4	0.4																																																																																																									
Total	18	5.6	<i>Caranx melampygus</i>	4	2.1																																																																																																									
Haul time:11m Long:63°20.904' Lat:19°49.694'			<i>Lethrinus nebulosus</i>	3	1.6																																																																																																									
Species	No. individuals	Weight (kg)	<i>Mulloidichthys flavolineatus</i>	16	3.8																																																																																																									
<i>Acanthurus triostegus</i>	2		<i>Naso unicornis</i>	2	3.4																																																																																																									
<i>Caranx melampygus</i>	1	0.7	<i>Parupeneus barberinus</i>	1	0.3																																																																																																									
<i>Lethrinus mahsena</i>	1	0.3	<i>Scarus ghoban</i>	4	4.3																																																																																																									
<i>Naos unicornis</i>	1	0.7	<i>Scarus sordidus</i>	13	2.9																																																																																																									
<i>Parupeneus barberinus</i>	1	0.6	<i>Siganus argenteus</i>	1	0.2																																																																																																									
<i>Scarus sordidus</i>	2	0.3	<i>Siganus sutor</i>	7	3.5																																																																																																									
<i>Siganus argenteus</i>	4	0.5	Total	59	27.7																																																																																																									
<i>Siganus sutor</i>		12.9	Haul time:12m Long:63°21.035' Lat:19°49.759'																																																																																																											
Total	39	16.4	Haul time:10m Long:63°12.092' Lat:19°49.817'			Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	<i>Acanthurus spp.</i>	7	3.6	<i>Acanthurus spp.</i>	2	1.7	<i>Acanthurus triostegus</i>	190	18.8	<i>Acanthurus triostegus</i>	20	2.4	<i>Naso unicornis</i>	2	2.9	<i>Caranx melampygus</i>	5	3.2	<i>Parupeneus barberinus</i>	1	0.1	<i>Mulloidichthys flavolineatus</i>	5	1.3	<i>Scarus ghoban</i>	1	3.0	<i>Parupeneus barberinus</i>	1	0.3	<i>Scarus sordidus</i>	60	15.6	<i>Scarus sordidus</i>	5	1.4	<i>Siganus argenteus</i>	6	0.8	<i>Siganus argenteus</i>	2	0.7	<i>Siganus sutor</i>	15	7.7	<i>Siganus sutor</i>	21	10.2	Total	282	52.4	Total	61	21.2	Haul time:9m Long:63°21.175' Lat:19°49.807'			Haul time:8m Long:63°21.249' Lat:19°49.796'			Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	No fish caught	0	0	<i>Acanthurus triostegus</i>	9	1.3	Total	0	0	<i>Lethrinus nebulosus</i>	1	0.6	Haul time:7m Long:63°21.430' Lat:19°49.761'			<i>Mulloidichthys flavolineatus</i>	1	0.2	Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	Acanthurus triostegus	5	0.8	Acanthurus triostegus	5	0.8
Haul time:10m Long:63°12.092' Lat:19°49.817'			Species	No. individuals	Weight (kg)																																																																																																									
Species	No. individuals	Weight (kg)	<i>Acanthurus spp.</i>	7	3.6																																																																																																									
<i>Acanthurus spp.</i>	2	1.7	<i>Acanthurus triostegus</i>	190	18.8																																																																																																									
<i>Acanthurus triostegus</i>	20	2.4	<i>Naso unicornis</i>	2	2.9																																																																																																									
<i>Caranx melampygus</i>	5	3.2	<i>Parupeneus barberinus</i>	1	0.1																																																																																																									
<i>Mulloidichthys flavolineatus</i>	5	1.3	<i>Scarus ghoban</i>	1	3.0																																																																																																									
<i>Parupeneus barberinus</i>	1	0.3	<i>Scarus sordidus</i>	60	15.6																																																																																																									
<i>Scarus sordidus</i>	5	1.4	<i>Siganus argenteus</i>	6	0.8																																																																																																									
<i>Siganus argenteus</i>	2	0.7	<i>Siganus sutor</i>	15	7.7																																																																																																									
<i>Siganus sutor</i>	21	10.2	Total	282	52.4																																																																																																									
Total	61	21.2	Haul time:9m Long:63°21.175' Lat:19°49.807'																																																																																																											
Haul time:8m Long:63°21.249' Lat:19°49.796'			Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	No fish caught	0	0	<i>Acanthurus triostegus</i>	9	1.3	Total	0	0	<i>Lethrinus nebulosus</i>	1	0.6	Haul time:7m Long:63°21.430' Lat:19°49.761'			<i>Mulloidichthys flavolineatus</i>	1	0.2	Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	Acanthurus triostegus	5	0.8	Acanthurus triostegus	5	0.8																																																																					
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)																																																																																																									
Species	No. individuals	Weight (kg)	No fish caught	0	0																																																																																																									
<i>Acanthurus triostegus</i>	9	1.3	Total	0	0																																																																																																									
<i>Lethrinus nebulosus</i>	1	0.6	Haul time:7m Long:63°21.430' Lat:19°49.761'																																																																																																											
<i>Mulloidichthys flavolineatus</i>	1	0.2	Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)	Acanthurus triostegus	5	0.8	Acanthurus triostegus	5	0.8																																																																																																
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)																																																																																																									
Acanthurus triostegus	5	0.8	Acanthurus triostegus	5	0.8																																																																																																									

<i>Parupeneus barberinus</i>	2	1.1	<i>Mulloidichthys flavolineatus</i>	1	0.3
<i>Siganus sutor</i>	11	5.7	<i>Parupeneus barberinus</i>	2	1.3
Total	24	8.8	<i>Rhinecanthus aculeatus</i>	1	0.2
Haul time:6m Long:63°21.615' Lat:19°49.774'			<i>Siganus sutor</i>	5	2.9
Species	No. individuals	Weight (kg)	Total	14	5.5
<i>Lethrinus nebulosus</i>	9	5.4			
<i>Mulloidichthys flavolineatus</i>	7	1.8			
<i>Scarus sordidus</i>	1	0.4			
<i>Siganus argenteus</i>	1	0.1			
<i>Siganus sutor</i>	14	7.1			
Total	32	14.8			

Fishing base: Pointe Corail Date: 23-Jun No. fishers : 21 No. boats : 8 Duration of fishing day : 8^h30^m					
Haul time:21m Long:63°23.507' Lat:19°48.254'			Haul time:10m Long:63°23.671' Lat:19°48.180'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Siganus sutor</i>	23	10.0	No fish caught	0	0
Total	23	10.0	Total	0	0
Haul time:8m Long:63°23.821' Lat:19°48.104'			Haul time:8m Long:63°23.965' Lat:19°48.128'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Caranx melampygus</i>	2	0.2	No fish caught	0	0
<i>Gerres longirostris</i>	6	1.4	Total	0	0
<i>Siganus sutor</i>	5	2.0			
Total	13	3.6	Haul time:15m Long:63°24.056' Lat:19°48.322'		
Haul time:10m Long:63°24.202' Lat:19°48.403'			Species	No. individuals	Weight (kg)
Species	No. individuals	Weight (kg)	<i>Caranx melampygus</i>	1	0.1
<i>Caranx melampygus</i>	1	0.5	<i>Gerres longirostris</i>	12	3.6
<i>Gerres longirostris</i>	2	0.5	<i>Lethrinus nebulosus</i>	2	8.9
<i>Mulloidichthys flavolineatus</i>	5	1.2	<i>Parupeneus barberinus</i>	8	2.6
<i>Scomberoides lisan</i>	1	1.3	<i>Scarus sordidus</i>	1	0.3
<i>Siganus sutor</i>	3	1.3	<i>Siganus sutor</i>	13	5.4
Total	12	4.8	Total	37	13.0
Haul time:12m Long:63°24.476' Lat:19°48.563'			Haul time:15m Long:63°24.270' Lat:19°48.520'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Caranx melampygus</i>	9	2.7	<i>Caranx melampygus</i>	1	0.2
<i>Gerres longirostris</i>	12	3.2	<i>Gerres longirostris</i>	5	0.8
<i>Hipposcarus harid</i>	3	1.5	<i>Hipposcarus harid</i>	1	0.5
<i>Mulloidichthys flavolineatus</i>	22	5.8	<i>Scarus sordidus</i>	1	0.6
<i>Parupeneus barberinus</i>	1	0.5	<i>Siganus sutor</i>	14	6.2
<i>Scarus sordidus</i>	1	1.5	<i>Tylosaurus crocodiles</i>	1	1.5
<i>Siganus sutor</i>	15	6.3	Total	23	9.9
Total	63	21.5	Haul time:10m Long:63°24.292' Lat:19°39.411'		
Haul time:12m Long:63°24.300' Lat:19°49.491'			Species	No. individuals	Weight (kg)
Species	No. individuals	Weight (kg)	<i>Acanthurus triostegus</i>	4	0.8
<i>Acanthurus mata</i>	1	0.2	<i>Hipposcarus harid</i>	1	0.2
<i>Acanthurus triostegus</i>	1	0.2	<i>Lethrinus nebulosus</i>	2	1.0
<i>Anampsese caeruleopunctatus</i>	1	0.8	<i>Mulloidichthys flavolineatus</i>	2	0.6
<i>Lethrinus nebulosus</i>	4	1.9	<i>Siganus sutor</i>	15	8.2
<i>Naso tuberosus</i>	1	4.0	Total	24	10.7
<i>Scarus ghoban</i>	2	7.3	Haul time:11m Long:63°24.406' Lat:19°49.483'		
<i>Scarus sordidus</i>	1	0.3	Species	No. individuals	Weight (kg)
<i>Siganus sutor</i>	9	4.1	<i>Acanthurus triostegus</i>	1	0.1
Total	20	18.7	<i>Caranx melampygus</i>	1	0.6
Haul time:10m Long:63°24.511' Lat:19°49.456'			<i>Lethrinus mahsena</i>	3	1.4
Species	No. individuals	Weight (kg)	<i>Lethrinus nebulosus</i>	5	2.5
<i>Acanthurus mata</i>	2	0.3	<i>Scarus ghoban</i>	3	6.6
<i>Lethrinus mahsena</i>	1	0.3	<i>Scarus sordidus</i>	7	3.7
<i>Scarus sordidus</i>	11	4.8	<i>Siganus sutor</i>	8	3.4
<i>Siganus sutor</i>	3	1.4	Total	28	18.4
Total	17	6.7	Haul time:10m Long:63°24.655' Lat:19°49.430'		
Haul time:15m Long:63°25.367' Lat:19°49.124'			Species	No. individuals	Weight (kg)
Species	No. individuals	Weight (kg)	<i>Acanthurus triostegus</i>	1	0.1
No fish caught	0	0	<i>Lethrinus mahsena</i>	1	0.4
Total	0	0	<i>Lethrinus nebulosus</i>	6	4.1
Haul time:10m Long:63°25.489' Lat:19°49.239'			<i>Mulloidichthys flavolineatus</i>	1	0.5
Species	No. individuals	Weight (kg)	<i>Scarus sordidus</i>	3	1.0
No fish caught	0	0	<i>Siganus sutor</i>	3	1.1
Total	0	0	Total	15	7.1
Haul time:10m Long:63°25.250' Lat:19°48.681'			Haul time:10m Long:63°25.710' Lat:19°49.843'		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)

Species	No. individuals	Weight (kg)			
<i>Acanthurus triostegus</i>	1	0.1	<i>Acanthurus triostegus</i>	1	0.1
<i>Caranx melampygus</i>	1	1.2	<i>Anampsces caeruleopunctatus</i>	1	0.5
<i>Lethrinus nebulosus</i>	4	3.0	<i>Caranx melampygus</i>	1	1.0
<i>Naso unicornis</i>	4	3.0	<i>Lethrinus mahsena</i>	1	0.3
<i>Siganus sutor</i>	3	1.5	<i>Mulloidichthys vanicolensis</i>	5	1.7
Total	13	8.8	<i>Scarus sordidus</i>	2	3.8
			Total	11	7.5
<i>Haul time:13m Long:63°23.301' Lat:19°48.643'</i>			<i>Haul time:10m Long:63°23.301' Lat:19°48.643'</i>		
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>No fish caught</i>	0	0	<i>Mulloidichthys flavolineatus</i>	13	3.9
Total	0	0	<i>Siganus sutor</i>	10	3.6
<i>Haul time:10m Long:63°23.251' Lat:19°48.488'</i>			Total	23	7.5
Species	No. individuals	Weight (kg)			
<i>No fish caught</i>	0	0			
Total	0	0			

Fishing base: Pointe l'Aigle		Date: 28-Jun	No. fishers : 21	No. boats : 6	Duration of fishing day : 4 ^h 20 ^m
<i>Haul time:15m Long:63°25.590' Lat:19°40.416'</i>					<i>Haul time:11m Long:63°25.765' Lat:19°40.345'</i>
Species	No. individuals	Weight (kg)	Species	No. individuals	Weight (kg)
<i>Acanthurus triostegus</i>	1	0.1	<i>Acanthurus triostegus</i>	2	0.2
<i>Caranx papuensis</i>	1	1.1	<i>Lethrinus nebulosus</i>	2	0.2
<i>Mulloidichthys flavolineatus</i>	7	1.9	<i>Mulloidichthys flavolineatus</i>	2	0.7
<i>Parupeneus barberinus</i>	1	0.4	<i>Siganus sutor</i>	22	3.8
<i>Rhinecanthus aculeatus</i>	2	0.6	Total	28	4.9
<i>Siganus sutor</i>	26	6.1	<i>Haul time:10m Long:63°25.876' Lat:19°40.340'</i>		
<i>Valamugil seheli</i>	9	5.6	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
Total	47	15.9	<i>Acanthurus triostegus</i>	6	1.1
<i>Haul time:25 Long:63°25.965' Lat:19°40.309'</i>			<i>Caranx melampygus</i>	1	0.1
Species	No. individuals	Weight (kg)			
<i>Caranx melampygus</i>	1	0.2	<i>Lethrinus nebulosus</i>	3	0.4
<i>Gerres longirostris</i>	9	2.0	<i>Mulloidichthys flavolineatus</i>	4	1.1
<i>Mulloidichthys flavolineatus</i>	2	0.5	<i>Parupeneus ciliatus</i>	1	0.3
<i>Rhinecanthus aculeatus</i>	3	0.7	<i>Siganus sutor</i>	27	6.9
<i>Siganus sutor</i>	88	15.2	<i>Valamugil seheli</i>	15	9.1
<i>Upeneus vittatus</i>	14	5.3	Total	57	18.9
<i>Valamugil seheli</i>	17	10.1	<i>Haul time:10m Long:63°26.140' Lat:19°40.259'</i>		
Total	134	34.0	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Haul time:10m Long:63°26.310' Lat:19°40.020'</i>			<i>Gerres longirostris</i>	11	3.1
Species	No. individuals	Weight (kg)			
<i>Caranx melampygus</i>	2	0.4	<i>Lethrinus harak</i>	1	0.7
<i>Rhinecanthus aculeatus</i>	3	0.4	Total	12	3.8
<i>Valamugil seheli</i>	76	64.3	<i>Haul time:10m Long:63°26.313' Lat:19°39.804'</i>		
Total	81	65.2	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
<i>Haul time:15m Long:63°26.400' Lat:19°39.686'</i>			<i>Acanthurus mata</i>	1	0.1
Species	No. individuals	Weight (kg)			
<i>Acanthurus triostegus</i>	21	20.1	<i>Acanthurus triostegus</i>	28	3.7
<i>Anampsces caeruleopunctatus</i>	1	0.1	<i>Caranx melampygus</i>	11	4.3
<i>Caranx melampygus</i>	31	20.0	<i>Gerres longirostris</i>	6	1.9
<i>Cheilinus trilobatus</i>	2	0.6	<i>Siganus sutor</i>	2	0.5
<i>Gerres longirostris</i>	1	0.4	Total	48	10.6
<i>Lethrinus harak</i>	1	0.7	<i>Haul time:5m Long:63°26.239' Lat:19°40.035'</i>		
<i>Mulloidichthys flavolineatus</i>	2	0.5	<i>Caranx melampygus</i>	1	0.5
<i>Scarus ghoban</i>	3	0.9	<i>Carangoides orthogrammus</i>	2	3.8
<i>Scarus sordidus</i>	4	1.0	<i>Naso unicornis</i>	23	45.9
<i>Siganus rivulatus</i>	2	0.3	<i>Rhabdosargus sarba</i>	1	1.7
<i>Siganus sutor</i>	4	1.7	<i>Siganus sutor</i>	4	3.0
Total	72	28.1	<i>Valamugil seheli</i>	2	1.7
Haul time:10m Long:63°25.735' Lat:19°40.310'			Total	33	56.5
Species	No. individuals	Weight (kg)			
<i>Siganus sutor</i>	3	0.5	<i>Haul time:10m Long:63°25.946' Lat:19°40.264'</i>		
<i>Valamugil seheli</i>	13	8.2	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
Total	16	8.7	<i>Acanthurus triostegus</i>	1	0.2
<i>Haul time:10m Long:63°25.802' Lat:19°40.452'</i>			<i>Lethrinus nebulosus</i>	3	1.2
Species	No. individuals	Weight (kg)			
<i>Acanthurus triostegus</i>	9	1.3	<i>Siganus sutor</i>	27	7.8
<i>Lethrinus harak</i>	1	1.0	<i>Upeneus vittatus</i>	7	2.7
Total	10	2.3	Total	38	11.9
<i>Haul time:10m Long:63°25.716' Lat:19°40.497'</i>			<i>Haul time:10m Long:63°25.643' Lat:19°40.432'</i>		
Species	No. individuals	Weight (kg)			
<i>Valamugil seheli</i>	2	1.1	<i>Species</i>	<i>No. individuals</i>	<i>Weight (kg)</i>
Total	2	1.1	<i>No fish caught</i>	0	0

			Total	0	0
Fishing base: Baie du Nord Date: 29-Jun	No. fishers : 20	No. boats : 6			
<i>Haul time:12m Long:63°22.639' Lat:19°40.433'</i>		<i>Haul time:17m Long:63°18.900' Lat:19°43.485'</i>			
<i>Species No. individuals Weight (kg)</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Caranx melampygus 21 5.3</i>		<i>Caranx melampygus 19 5.8</i>			
<i>Gerres longirostris 19 5.4</i>		<i>Gerres longirostris 9 2.4</i>			
<i>Lethrinus nebulosus 88 45.8</i>		<i>Lethrinus nebulosus 5 1.9</i>			
<i>Mugil cephalus 1 2.0</i>		<i>Scomberoides lysan 1 1.0</i>			
<i>Mulloidichthys flavolineatus 4 1.6</i>		<i>Siganus sutor 7 2.1</i>			
<i>Scomberoides lysan 1 1.0</i>		<i>Upeneus vittatus 2 0.8</i>			
<i>Siganus sutor 106 49.7</i>		Total 43 14.0			
Total 240 110.8					
<i>Haul time:9m Long:63°17.942' Lat:19°42.317'</i>		<i>Haul time:13m Long:63°18.896' Lat:19°43.491'</i>			
<i>Species No. individuals Weight (kg)</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Acanthurus triostegus 4 0.4</i>		<i>No fish caught 0 0</i>			
<i>Caranx melampygus 1 0.1</i>		Total 0 0			
<i>Lethrinus nebulosus 3 0.4</i>		<i>Haul time:9m Long:63°17.915' Lat:19°42.442'</i>			
<i>Mulloidichthys flavolineatus 77 19.0</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Siganus sutor 1 0.4</i>		<i>No fish caught 0 0</i>			
Total 86 20.4		Total 0 0			
<i>Haul time:10m Long:63°18.015' Lat:19°42.180'</i>		<i>Haul time:12m Long:63°18.100' Lat:19°41.918'</i>			
<i>Species No. individuals Weight (kg)</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Acanthurus triostegus 6 0.4</i>		<i>No fish caught 0 0</i>			
<i>Caranx melampygus 4 0.7</i>		Total 0 0			
<i>Gerres longirostris 2 0.3</i>		<i>Haul time:12m Long:63°18.130' Lat:19°41.706'</i>			
<i>Mulloidichthys flavolineatus 125 33.8</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Parupeneus barberinus 6 2.2</i>		<i>No fish caught 0 0</i>			
<i>Parupeneus macronema 1 0.2</i>		Total 0 0			
<i>Scarus ghoban 2 1.1</i>		<i>Haul time:20m Long:63°18.120' Lat:19°41.663'</i>			
<i>Scarus sordidus 2 0.7</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Siganus argenteus 10 2.5</i>		<i>Acanthurus triostegus 1 0.1</i>			
<i>Siganus sutor 7 2.6</i>		<i>Caranx melampygus 1 0.1</i>			
Total 165 44.5		<i>Mulloidichthys flavolineatus 48 10.3</i>			
<i>Haul time:8m Long:63°18.186' Lat:19°41.328'</i>		<i>Parupeneus barberinus 2 0.8</i>			
<i>Species No. individuals Weight (kg)</i>		<i>Siganus sutor 4 1.6</i>			
<i>Acanthurus triostegus 3 0.3</i>		Total 56 12.9			
<i>Mulloidichthys flavolineatus 143 31.3</i>		<i>Haul time:10m Long:63°18.290' Lat:19°41.185'</i>			
Total 146 31.6		<i>Species No. individuals Weight (kg)</i>			
<i>Haul time:10m Long:63°18.317' Lat:19°41.064'</i>		<i>No fish caught 0 0</i>			
<i>Species No. individuals Weight (kg)</i>		Total 0 0			
<i>Mulloidichthys flavolineatus 77 18.3</i>		<i>Haul time:9m Long:63°18.355' Lat:19°40.966'</i>			
Total 77 18.3		<i>Species No. individuals Weight (kg)</i>			
<i>Haul time:9m Long:63°18.452' Lat:19°40.604'</i>		<i>No fish caught 0 0</i>			
<i>Species No. individuals Weight (kg)</i>		Total 0 0			
<i>Caranx melampygus 54 12.6</i>		<i>Haul time:15m Long:63°20.921' Lat:19°41.262'</i>			
<i>Lethrinus nebulosus 7 2.3</i>		<i>Species No. individuals Weight (kg)</i>			
<i>Mulloidichthys flavolineatus 43 9.7</i>		<i>Acanthurus triostegus 9 1.9</i>			
Total 104 24.6		<i>Caranx melampygus 7 0.6</i>			
Fishing base: Baie du Nord Date: 14-Jul No. fishers : 20 No. boats : 7 Duration of fishing day : 7 ^h 54 ^m		<i>Gerres longirostris 73 10.9</i>			
		<i>Lethrinus nebulosus 1 0.1</i>			
		<i>Mulloidichthys vanicolensis 9 2.0</i>			
		<i>Rhabdosargus sarba 1 0.4</i>			
		<i>Siganus sutor 106 25.8</i>			
		<i>Valamugil seheli 2 1.9</i>			
		Total 208 43.7			
		<i>Haul time:28m Long:63°20.755' Lat:19°41.021'</i>			
		<i>Species No. individuals Weight (kg)</i>			

<i>Valamugil seheli</i>	1	0.6	<i>Gerres longirostris</i>	3	0.8
Total	141	18.3	<i>Lethrinus nebulosus</i>	2	1.0
Haul time:54m Long:63°19.523' Lat:19°41.524'			<i>Mugil cephalus</i>	83	147.4
Species	No. individuals	Weight (kg)	<i>Mulloidichthys vanicolensis</i>	5	1.4
No fish caught	0	0	<i>Rhabdosargus sarba</i>	2	3.5
Total	0	0	<i>Upeneus vittatus</i>	2	1.0
			<i>Valamugil seheli</i>	17	17.3
			Total	114	172.4

Fishing base: Pointe L'Aigle	Date: 15-Jul	No. fishers :	No. boats :	Duration of fishing day : 3 ^h
No sets				

Fishing base: Pointe Corail	Date: 28-Jul	No. fishers :	No. boats :	Duration of fishing day : 7 ^h
Haul time:7m Long:63°23.859' Lat:19°48.028'			Haul time:14m Long:63°23.822' Lat:19°48.087'	
Species	No. individuals	Weight (kg)	Species	No. individuals Weight (kg)
<i>Lethrinus nebulosus</i>	1	0.5	<i>Lethrinus nebulosus</i>	1 0.2
<i>Mulloidichthys flavolineatus</i>	26	5.6	<i>Mulloidichthys flavolineatus</i>	42 12.1
<i>Siganus sutor</i>	1	0.7	<i>Siganus sutor</i>	1 0.3
<i>Sphyraeno jello</i>	1	0.4	Total	44 12.6
Total	29	7.1	Haul time:5m Long:63°23.866' Lat:19°48.192'	
Haul time:10m Long:63°24.060' Lat:19°48.346'			Species	No. individuals Weight (kg)
Species	No. individuals	Weight (kg)	<i>Lethrinus nebulosus</i>	17 3.2
<i>Acanthurus triostegus</i>	3	0.5	<i>Mulloidichthys flavolineatus</i>	61 14.7
<i>Caranx melampygus</i>	4	0.7	<i>Rhinecanthus aculeatus</i>	1 0.3
<i>Lethrinus nebulosus</i>	5	0.8	<i>Siganus sutor</i>	9 2.8
<i>Mulloidichthys flavolineatus</i>	73	17.3	Total	88 21.0
<i>Siganus sutor</i>	22	7.3	Haul time:9m Long:63°24.208' Lat:19°48.455'	
Total	107	26.6	Species	No. individuals Weight (kg)
Haul time:5m Long:63°24.375' Lat:19°48.550'			<i>Caranx melampygus</i>	1 0.1
Species	No. individuals	Weight (kg)	<i>Hipposcarus harid</i>	1 0.3
<i>Mulloidichthys flavolineatus</i>	4	0.9	<i>Lethrinus nebulosus</i>	11 1.6
<i>Siganus sutor</i>	15	5.3	<i>Mulloidichthys flavolineatus</i>	14 3.1
Total	19	6.2	<i>Parupeneus barberinus</i>	1 0.5
Haul time:10m Long:63°24.505' Lat:19°48.821'			<i>Siganus sutor</i>	24 7.9
Species	No. individuals	Weight (kg)	Total	52 13.4
<i>Acanthurus triostegus</i>	2	0.2	Haul time:13m Long:63°24.649' Lat:19°48.916'	
Lethrinus nebulosus	3	0.5	Species	No. individuals Weight (kg)
<i>Mulloidichthys flavolineatus</i>	94	17.6	<i>Acanthurus triostegus</i>	1 0.2
<i>Parupeneus rubescens</i>	3	0.4	<i>Caranx melampygus</i>	1 0.2
<i>Scarus sordidus</i>	1	0.4	<i>Gerres longirostris</i>	3 0.7
<i>Siganus sutor</i>	8	4.1	<i>Mulloidichthys flavolineatus</i>	5 1.1
Total	111	23.2	<i>Siganus sutor</i>	9 3.5
Haul time:6m Long:63°25.134' Lat:19°48.249'			Total	19 5.7
Species	No. individuals	Weight (kg)	Haul time:6m Long:63°24.760' Lat:19°48.147'	
<i>Acanthurus triostegus</i>	1	0.1	Species	No. individuals Weight (kg)
<i>Anampsese caeruleopunctatus</i>	1	1.6	<i>Acanthurus spp</i>	1 0.8
<i>Caranx melampygus</i>	3	0.4	<i>Siganus sutor</i>	7 1.7
<i>Gerres longirostris</i>	3	0.7	Total	8 2.5
<i>Mulloidichthys flavolineatus</i>	14	2.4	Haul time:5m Long:63°24.643' Lat:19°48.149'	
<i>Rhinecanthus aculeatus</i>	2	0.5	Species	No. individuals Weight (kg)
Scarus ghoban	2	0.9	<i>No fish caught</i>	0 0
<i>Siganus sutor</i>	19	6.8	Total	0 0
Total	45	13.4	Haul time:10m Long:63°24.452' Lat:19°48.118'	
Haul time:9m Long:63°24.431' Lat:19°48.114'			Species	No. individuals Weight (kg)
Species	No. individuals	Weight (kg)	<i>Acanthurus triostegus</i>	5 0.6
<i>Caranx melampygus</i>	3	1.0	<i>Caranx melampygus</i>	2 0.4
<i>Gerres longirostris</i>	7	1.6	<i>Lethrinus nebulosus</i>	3 1.5
<i>Mulloidichthys flavolineatus</i>	49	10.7	<i>Mulloidichthys flavolineatus</i>	18 4.5
<i>Parupeneus barberinus</i>	1	0.5	Total	28 7.1
<i>Scomberoides lisan</i>	1	0.8	Haul time:10m Long:63°23.607' Lat:19°48.106'	
<i>Siganus argenteus</i>	1	0.2	Species	No. individuals Weight (kg)
<i>Siganus sutor</i>	1	0.2	<i>Gerres longirostris</i>	1 0.3
<i>Sphyraeno jello</i>	15	8.7	<i>Lethrinus nebulosus</i>	1 0.4
Total	78	23.6	<i>Mulloidichthys flavolineatus</i>	5 1.2
			<i>Scarus ghoban</i>	2 5.6
			<i>Siganus sutor</i>	5 1.6
			Total	14 9.1

Fishing base: Pointe Corail Date: 29-Jul No. fishers : 18 No. boats : 6 Duration of fishing day : 5^h55^m		
Haul time: 6m Long:63°22.799' Lat:19°48.278'		
Species No. individuals Weight (kg)		
<i>Mulloidichthys flavolineatus</i> 9 2.1		
<i>Siganus sutor</i> 18 3.2		
Total 27 5.3		
Haul time: 7m Long:63°23.156' Lat:19°48.304'		
Species No. individuals Weight (kg)		
<i>Mulloidichthys flavolineatus</i> 8 2.1		
<i>Siganus sutor</i> 16 4.7		
Total 24 6.8		
Haul time: 6m Long:63°23.566' Lat:19°48.022'		
Species No. individuals Weight (kg)		
<i>Caranx melampygus</i> 1 0.2		
<i>Lethrinus nebulosus</i> 2 1.3		
<i>Mulloidichthys flavolineatus</i> 135 25.7		
<i>Siganus sutor</i> 6 1.7		
Total 144 28.9		
Haul time: 10m Long:63°23.350' Lat:19°48.380'		
Species No. individuals Weight (kg)		
<i>Mulloidichthys flavolineatus</i> 9 2.6		
<i>Siganus sutor</i> 6 2.9		
Total 15 5.5		
Haul time: 7m Long:63°23.335' Lat:19°48.522'		
Species No. individuals Weight (kg)		
No fish caught 0 0		
Total 0 0		
Haul time: 11m Long:63°23.309' Lat:19°48.619'		
Species No. individuals Weight (kg)		
<i>Caranx melampygus</i> 1 0.1		
<i>Mulloidichthys flavolineatus</i> 13 3.7		
<i>Siganus sutor</i> 10 2.7		
Total 24 6.5		
Haul time: 12m Long:63°23.884' Lat:19°48.747'		
Species No. individuals Weight (kg)		
No fish caught 0 0		
Total 0 0		
Haul time: 10m Long:63°24.438' Lat:19°48.531'		
Species No. individuals Weight (kg)		
<i>Caranx melampygus</i> 1 0.4		
<i>Mulloidichthys flavolineatus</i> 6 1.8		
Total 7 2.2		
Haul time: 9m Long:63°24.476' Lat:19°48.203'		
Species No. individuals Weight (kg)		
<i>Acanthurus triostegus</i> 1 0.1		
<i>Lethrinus nebulosus</i> 1 0.7		
<i>Mulloidichthys flavolineatus</i> 56 13.6		
<i>Parupeneus rubescens</i> 1 0.1		
<i>Siganus sutor</i> 1 0.2		
<i>Sphyraeno jello</i> 1 0.5		
Total 61 15.2		
Haul time: 10m Long:63°24.340' Lat:19°48.048'		
Species No. individuals Weight (kg)		
<i>Acanthurus spp.</i> 3 1.7		
<i>Acanthurus triostegus</i> 1 0.2		
<i>Caranx melampygus</i> 2 0.9		
<i>Lethrinus nebulosus</i> 2 1.0		
<i>Mulloidichthys flavolineatus</i> 173 39.8		
<i>Scarus sordidus</i> 1 0.8		
<i>Sphyraeno jello</i> 1 0.6		
Total 184 44.9		

Fishing base: Pointe L'Aigle Date: 10-Aug No. fishers : 20 No. boats : 7 Duration of fishing day : 6^h53^m		
Haul time: 25m Long:63°21.567' Lat:19°41.204'		
Species No. individuals Weight (kg)		
No fish caught 0 0		
Total 0 0		
Haul time: 15m Long:63°20.990' Lat:19°40.718'		
Species No. individuals Weight (kg)		
No fish caught 0 0		
Total 0 0		

Haul time:21 Long:63°21.104' Lat:19°40.791'	Haul time:12m Long:63°20.918' Lat:19°40.787'
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)
<i>Acanthurus triostegus</i> 2 0.2	<i>Caranx melampygus</i> 6 0.7
<i>Caranx melampygus</i> 49 5.7	<i>Gerres longirostris</i> 14 3.1
<i>Gerres longirostris</i> 11 2.4	<i>Lethrinus nebulosus</i> 1 3.2
<i>Gnathanodon speciosus</i> 1 0.5	<i>Siganus sutor</i> 10 3.4
<i>Scomberoides lysan</i> 8 3.4	<i>Upeneus vittatus</i> 2 1.0
<i>Siganus sutor</i> 8 2.9	Total 33 11.3
<i>Sphyraeno jello</i> 1 0.1	
Total 80 15.1	
Haul time:7m Long:63°20.467' Lat:19°40.994'	Haul time:10m Long:63°20'766' Lat:19°40.829'
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)
<i>No fish caught</i> 0 0	<i>Caranx melampygus</i> 7 1.8
Total 0 0	<i>Gerres longirostris</i> 8 1.7
	<i>Lethrinus nebulosus</i> 9 1.9
	<i>Siganus sutor</i> 5 3.4
	<i>Upeneus vittatus</i> 4 1.9
	Total 33 10.6

Fishing base: Baie du Nord Date: 11-Aug		No. fishers : 15	No. boats : 4	Duration of fishing day : 7^h15^m
Haul time:19m Long:63°19.018' Lat:19°39.853'	Haul time:18m Long:63°18.400' Lat:19°40.968'			
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)			
<i>No fish caught</i> 0 0	<i>No fish caught</i> 0 0			
Total 0 0	Total 0 0			
Haul time:5m Long:63°18.400' Lat:19°40.968'	Haul time:10m Long:63°17.898' Lat:19°42.487'			
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)			
<i>No fish caught</i> 0 0	<i>No fish caught</i> 0 0			
Total 0 0	Total 0 0			
Haul time:10m Long:63°17.961' Lat:19°42.263'				
Species No. individuals Weight (kg)				
<i>No fish caught</i> 0 0				
Total 0 0				

Fishing base: Port Sud Est Date: 17-Aug		No. fishers : 14	No. boats : 4	Duration of fishing day : 4^h35^m
No sets				

Fishing base: Pointe L'Aigle Date: 18-Aug		No. fishers : 20	No. boats : 6	Duration of fishing day : 5^h40^m
Haul time:11m Long:63°21.400' Lat:19°39.608'	Haul time:7m Long:63°21.230' Lat:19°39.696'			
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)			
<i>Acanthurus triostegus</i> 2 0.4	<i>Caranx melampygus</i> 4 1.6			
<i>Parupeneus barberinus</i> 1 0.9	<i>Siganus sutor</i> 3 1.8			
<i>Rhinecanthus aculeatus</i> 2 0.4	Total 7 3.4			
<i>Scarus ghobban</i> 3 7.0				
<i>Siganus sutor</i> 3 2.8				
Total 11 11.4				
Haul time:4m Long:63°20.847' Lat:19°39.664'	Haul time:5m Long:63°21.068' Lat:19°39.671'			
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)			
<i>Caranx melampygus</i> 3 1.1	<i>Caranx melampygus</i> 4 2.0			
<i>Naso unicornis</i> 27 45.7	<i>Naso unicornis</i> 2 3.4			
<i>Scarus ghobban</i> 5 13.9	<i>Siganus sutor</i> 1 0.7			
Total 35 60.7	<i>Zebrasoma veliferum</i> 1 0.2			
Haul time:7m Long:63°20.533' Lat:19°39.530'	Total 8 6.3			
Species No. individuals Weight (kg)				
<i>Caranx melampygus</i> 1 0.4				
<i>Naso unicornis</i> 32 35.9				
<i>Scarus ghobban</i> 2 1.8				
<i>Siganus argenteus</i> 1 0.3				
Total 36 38.5				
Haul time:19m Long:63°20.117' Lat:19°39.598'	Haul time:8m Long:63°20.697' Lat:19°39.522'			
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)			
<i>Caranx melampygus</i> 7 2.5	<i>Caranx melampygus</i> 1 0.4			
<i>Gerres longirostris</i> 13 7.9	<i>Naso unicornis</i> 25 38.9			
<i>Lethrinus harak</i> 1 0.5	<i>Scarus ghobban</i> 2 3.2			
<i>Lethrinus nebulosus</i> 24 14.2	<i>Scarus sordidus</i> 1 2.2			
<i>Mulloidichthys flavolineatus</i> 8 2.8	<i>Siganus argenteus</i> 2 0.6			
<i>Scarus ghobban</i> 5 10.2	Total 31 45.2			
<i>Siganus sutor</i> 6 3.2				
Total 64 41.3				
Haul time:21m Long:63°20'467' Lat:19°39.538'	Haul time:21m Long:63°20'467' Lat:19°39.538'			
Species No. individuals Weight (kg)	Species No. individuals Weight (kg)			
<i>Acanthurus triostegus</i> 2 0.3	<i>Acanthurus triostegus</i> 2 0.3			
<i>Caranx melampygus</i> 5 2.6	<i>Caranx melampygus</i> 5 2.6			
<i>Gerres longirostris</i> 12 5.5	<i>Gerres longirostris</i> 12 5.5			
<i>Lethrinus harak</i> 8 3.3	<i>Lethrinus harak</i> 8 3.3			
<i>Rhinecanthus aculeatus</i> 2 0.4	<i>Rhinecanthus aculeatus</i> 2 0.4			
<i>Siganus sutor</i> 100 40.8	Total 129 52.9			

Fishing base: Pointe L'Aigle Date: 6-Sep			No. fishers : 21	No. boats : 6	Duration of fishing day : 5 ^h 45 ^m
Haul time:12m Long:63°22.896' Lat:19°40.243'	Species No. individuals	Weight (kg)		Haul time:7m Long:63°22.851' Lat:19°40.041'	
<i>Siganus sutor</i>	125	30.4		Species No. individuals	Weight (kg)
Total	125	30.4		No fish caught	0
Haul time:10m Long:63°22.658' Lat:19°39.653'				Total	0
Species No. individuals	Weight (kg)				
No fish caught	0	0			
Total	0	0			
Haul time:20m Long:63°22.038' Lat:19°39.470'				Haul time:10m Long:63°22.955' Lat:19°39.425'	
Species No. individuals	Weight (kg)			Species No. individuals	Weight (kg)
No fish caught	0	0		No fish caught	0
Total	0	0		Total	0
Fishing base: Pointe L'Aigle Date: 7-Sep			No. fishers : 22	No. boats : 6	Duration of fishing day : 6 ^h 40 ^m
Haul time:6m Long:63°21.462' Lat:19°40.888'				Haul time:9m Long:63°21.561' Lat:19°40.913'	
Species No. individuals	Weight (kg)			Species No. individuals	Weight (kg)
<i>Mulloidichthys flavolineatus</i>	1	0.4		No fish caught	0
<i>Siganus sutor</i>	39	11.6		Total	0
Total	40	12.0			
Haul time:13m Long:63°20.763' Lat:19°40.817'				Haul time:10m Long:63°21.975' Lat:19°40.721'	
Species No. individuals	Weight (kg)			Species No. individuals	Weight (kg)
<i>Gerres longirostris</i>	6	1.4		<i>Caranx melampygus</i>	1
<i>Lethrinus nebulosus</i>	21	4.0		<i>Gerres longirostris</i>	27
<i>Mugil cephalus</i>	1	1.5		<i>Leiognathus equulus</i>	3
<i>Siganus sutor</i>	9	2.6		<i>Rhabdosargus sarba</i>	1
<i>Tylosaurus crocodilus</i>	1	1.4		<i>Siganus sutor</i>	3
<i>Valamugil seheli</i>	1	0.8		<i>Valamugil seheli</i>	1
Total	39	11.7		Total	36
Haul time:13m Long:63°20.384' Lat:19°40.755'				Haul time:12m Long:63°20.563' Lat:19°40.779'	
Species No. individuals	Weight (kg)			Species No. individuals	Weight (kg)
<i>Caranx melampygus</i>	3	0.5		<i>Caranx melampygus</i>	2
<i>Lethrinus nebulosus</i>	5	1.5		<i>Gerres longirostris</i>	1
<i>Mulloidichthys flavolineatus</i>	1	0.4		<i>Lethrinus nebulosus</i>	20
<i>Siganus sutor</i>	7	1.4		<i>Mulloidichthys flavolineatus</i>	1
Total	16	3.8		<i>Siganus sutor</i>	6
Haul time:12m Long:63°20.150' Lat:19°40.738'				Total	30
Species No. individuals	Weight (kg)			Haul time:17m Long:63°20.133' Lat:19°40.610'	
<i>Acanthurus triostegus</i>	1	0.2		Species No. individuals	Weight (kg)
<i>Gerres longirostris</i>	4	0.8		<i>Acanthurus triostegus</i>	1
<i>Lethrinus harak</i>	1	0.4		<i>Caranx melampygus</i>	3
<i>Lethrinus nebulosus</i>	7	1.6		<i>Gerres longirostris</i>	3
<i>Mulloidichthys flavolineatus</i>	5	1.5		<i>Lethrinus nebulosus</i>	12
<i>Siganus sutor</i>	13	3.9		<i>Siganus sutor</i>	30
<i>Tylosaurus crocodilus</i>	1	0.9		<i>Upeneus vittatus</i>	3
<i>Valamugil seheli</i>	2	2.8		<i>Valamugil seheli</i>	1
Total	33	12.1		Total	53
Haul time:10m Long:63°20.326' Lat:19°40.960'				Haul time:13m Long:63°19.972' Lat:19°40.670'	
Species No. individuals	Weight (kg)			Species No. individuals	Weight (kg)
<i>Caranx melampygus</i>	1	0.5		<i>Caranx melampygus</i>	7
<i>Caranx papuensis</i>	1	2.0		<i>Carangoides orthogrammus</i>	3
<i>Gerres longirostris</i>	8	2.2		<i>Caranx sexfasciatus</i>	1
<i>Leiognathus equulus</i>	3	0.7		<i>Gerres longirostris</i>	10
<i>Lethrinus nebulosus</i>	1	0.2		<i>Lethrinus nebulosus</i>	1
<i>Siganus sutor</i>	1	0.2		<i>Siganus sutor</i>	6
<i>Valamugil seheli</i>	1	1.0		<i>Upeneus vittatus</i>	1
Total	16	6.8		Total	29
Haul time:14m Long:63°21.044' Lat:19°40.812'				Haul time:11m Long:63°20.677' Lat:19°40.903'	
Species No. individuals	Weight (kg)			Species No. individuals	Weight (kg)
<i>Caranx melampygus</i>	5	1.6		<i>Caranx melampygus</i>	5
<i>Gerres longirostris</i>	26	8.5		<i>Caranx papuensis</i>	1
<i>Lethrinus nebulosus</i>	1	0.2		<i>Gerres longirostris</i>	11
<i>Upeneus vittatus</i>	6	3.1		<i>Lethrinus nebulosus</i>	13
<i>Valamugil seheli</i>	1	0.6		<i>Siganus sutor</i>	1
Total	39	14.0		<i>Upeneus vittatus</i>	2
Haul time:13m Long:63°21.240' Lat:19°40.842'				<i>Valamugil seheli</i>	4
Species No. individuals	Weight (kg)			Total	37
No fish caught	0	0			

Total	0	0	
Fishing base: Port Sud Est Date: 15-Sep No. fishers : 11 No. boats : 4 Duration of fishing day : 7^h05^m			
Haul time:5m Long:63°27.539' Lat:19°45.953'			Haul time:8m Long:63°29.500' Lat:19°45.800'
Species No. individuals Weight (kg)			Species No. individuals Weight (kg)
<i>Naso unicornis</i> 25 51.5			<i>No fish caught</i> 0 0
25 51.5			<i>Total</i> 0 0
Haul time:5m Long:63°27.830' Lat:19°45.750'			Haul time:10m Long:63°27.679' Lat:19°46.476'
Species No. individuals Weight (kg)			Species No. individuals Weight (kg)
<i>No fish caught</i> 0 0			<i>Naso unicornis</i> 10 9.2
<i>Total</i> 0 0			<i>Total</i> 10 9.2
Haul time:10m Long:63°26.600' Lat:19°46.640'			
Species No. individuals Weight (kg)			
<i>No fish caught</i> 0 0			
<i>Total</i> 0 0			
Fishing base: Baie du Nord Date: 23-Sep No. fishers : 13 No. boats : 4 Duration of fishing day : 5^h45^m			
Haul time:18m Long:63°19.243' Lat:19°41.066'			Haul time:8m Long:63°18.608' Lat:19°43.122'
Species No. individuals Weight (kg)			Species No. individuals Weight (kg)
<i>Caranx melmapygus</i> 1 0.5			<i>No fish caught</i> 0 0
<i>Gerres longirostris</i> 60 15.8			<i>Total</i> 0 0
<i>Leiognathus equulus</i> 12 2.1			
<i>Mugil cephalus</i> 1 1.6			
<i>Valamugil seheli</i> 4 3.8			
<i>Total</i> 78 23.8			
Fishing base: Pointe L'Aigle Date: 29-Sep No. fishers : 21 No. boats : 7 Duration of fishing day : 4^h			
Haul time:14m Long:63°24.595' Lat:19°40.392'			Haul time:12m Long:63°24.478' Lat:19°40.269'
Species No. individuals Weight (kg)			Species No. individuals Weight (kg)
<i>Lethrinus harak</i> 2 1.4			<i>Acanthurus triostegus</i> 3 0.5
<i>Siganus sutor</i> 25 8.8			<i>Lethrinus harak</i> 6 3.5
<i>Total</i> 27 10.2			<i>Lethrinus nebulosus</i> 4 6.7
Haul time:19m Long:63°24.184' Lat:19°39.910'			<i>Siganus sutor</i> 54 16.2
Species No. individuals Weight (kg)			<i>Total</i> 67 26.9
<i>No fish caught</i> 0 0			
<i>Total</i> 0 0			