Australian Government
Australian Fisheries Management Authority

NORTHERN PRAWN FISHERY
DATA SUMMARY

2007

Rocco Ciccosillo
Logbook Program
2008

NORTHERN PRAWN FISHERY DATA SUMMARY 2007

AFMA DATA SECTION
Rocco Ciccosillo
Northern Prawn Fishery Data Summary 2007
June 2008

AFMA Logbook Program
Level 6
173 Northbourne Ave
Civic ACT 2600

ISBN 1-877044-29-6

This report should be cited as: Ciccosillo, R. (2008).Northern Prawn Fishery Data Summary 2007. Logbook Program, Australian Fisheries Management Authority, Canberra.

Cover photograph source Dylan Skinns.

Published by the Australian Fisheries Management Authority

STREET ADDRESS

6th Floor
173 Northbourne Ave
Civic ACT 2600
Telephone: (02) 6225 5555
Facsimile: (02) 6225 5439

POSTAL ADDRESS ENQUIRIES

Box 7051
Canberra BC
ACT 2610

NORTHERN PRAWN FISHERY DATA SUMMARY 2007

Preface

Scope of the Report

This data summary provides a broad outline of the catch and effort for the Northern Prawn Fishery (NPF) and is an important mechanism for providing feedback to stakeholders on the logbook data received by AFMA. In addition, the extraction and analysis of the data by the Logbook Program helps to identify data quality issues and provides valuable information on how fishery data needs and collection methods can be improved.

AFMA has produced data summary reports for the NPF on an annual basis since 1999. The following data summary reviews the 2007 season prawn catch and effort for the NPF.

Acknowledgements

Production of this report was made possible through the efforts of the skippers and vessel owners and Crew Member Observers of the NPF. Skippers supplied daily logbook information and vessel owners completed seasonal landing returns. The log sheets and landing returns were processed by D&S Datafix.

If you have any comments or queries on this, or any other data summaries, please do not hesitate to call:

Melissa Brown, Manager Northern Prawn and Western Deepwater Trawl Fisheries, AFMA
Ph (02) 6225 5465

Also note that this Data Summary is available on AFMA's website: www.afma.gov.au

Table of contents

PREFACE 3

Scope of the Report 3

Acknowledgements 3

TABLE OF CONTENTS 4

INTRODUCTION 6

Description of the Northern Prawn Fishery 6
- Area of Fishery 6
- Fishing Methods 7
- Management Information 7
- Species 7
- Data Collection Program 8

Methods Used For Preparing Data Summary 8
- Banana and Tiger Prawn Fishery Components 8

Catch and Effort Data for the Northern Prawn Fishery 9
- Coverage 9
- Catch 9
- Catch by week 11

Effort 12
- Nominal and effective effort 12
- Catch Rate 13
- Catch, effort and catch rate by month 13

Vessel and gear information 15
- Vessel length 15
- Distribution of catch by vessel 15
- Average catch per vessel 16

CATCH AND EFFORT BY STATISTICAL AREA IN THE NPF 19

All areas 19
- Weipa 20
- Keerweer 22
- Edward 24
- Bold 29
- Sweers 31
- Mornington 33
- Limmen Bight 35
- Groote 37
- Gove 39
- Arnhem 41
- Port Essington 43
- Melville 45
- Fog Bay 47
- Bonaparte 49

BYCATCH IN THE NORTHERN PRAWN FISHERY 51
Turtle bycatch 51
Sea snake bycatch 53
Scampi Catch 53
Scientific Observer and Crew Member Observer coverage 53
State/Territory specific data 54
Byproduct of the NPF by State/Territory 56

Introduction

The Northern Prawn Fishery Data Summary 2007 contains catch and effort statistics by prawn species, area, time and fishery. Comprehensive bycatch information is also included for the information of stakeholders and to meet AFMA's obligations under Offshore Constitutional Settlements with Queensland, the Northern Territory and Western Australia. Interactions with threatened, endangered and protected (TEP) species including turtles and sea snakes are also reported.

Description of the Northern Prawn Fishery

Area of Fishery

The Northern Prawn Fishery is located off Australia's northern coast, and extends from the low water mark to the outer edge of the Australian fishing zone (AFZ) in the area between Cape York in Queensland and Cape Londonderry in Western Australia (Figure1).

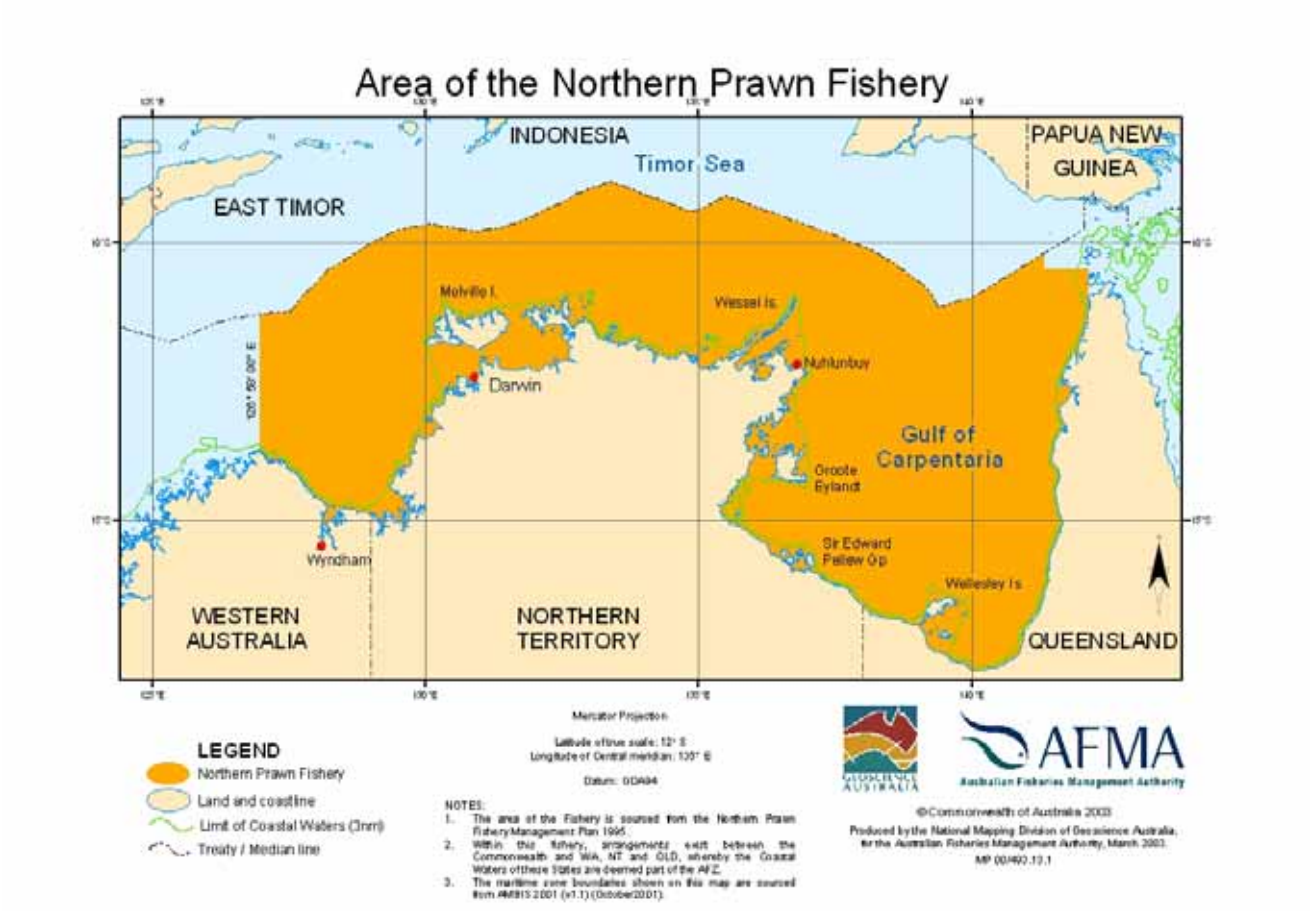

Figure 1: Northern Prawn Fishery Management Area.

Fishing Methods

Prawn trawling is an active fishing method that involves towing a conical-shaped net spread open by two steel or timber otter boards over the seabed, commonly called otter trawling. Ground chains are also used on the nets to stimulate prawns into the trawl mouth. Vessels in the NPF may tow a range of nets in a variety of configurations. These are regulated by the Northern Prawn Fishery Management Plan 1995 (the Management Plan) and relevant Determinations. In addition to the main nets a small net, or try-net, is used to test the catches for a given area. All trawl nets (other than try-nets) in the NPF are required to be fitted with approved Turtle Excluder Devices (TEDs) and Bycatch Reduction Devices (BRDs).

Most of the vessels in the NPF are purpose built from steel and range in length from 14 m to 28 m. All NPF boats have modern, sophisticated catch handling, packing and freezing capabilities as well as wet (brine) holding facilities. All use electronic aids such as colour echo sounders and Global Positioning Systems (GPS) and plotters. Satellite phone and fax equipment is used by most vessels and many have introduced on-board computing facilities. All vessels are required to have a Vessel Monitoring System (VMS).

Management Information

The Fishery is managed through a combination of input controls (limited entry, seasonal closures, permanent area closures, gear restrictions and operational controls) which are implemented under the Management Plan.

The Management Plan provides for the granting of fully transferable Statutory Fishing Rights (SFRs) that determine the number of trawlers that may operate and the amount of gear used in the Fishery. In 2001 the management plan was amended to allow the total gear pool to be set by determination. The gear SFR is set as an amount of headrope length, which can be varied depending on the stock status and economic grounds.

In 2002, measures to reduce effort by 40% on tiger prawns were introduced. This was achieved by shortening the seasons and a further 25% reduction in the value of an SFR from 24 August 2002. This resulted in a reduction in Class B SFRs from 119 to 102.

In 2004, the Northern Prawn Management Advisory Committee (NORMAC) agreed that the overall management objective of the fishery should be to maximise the economic yield (MEY). Bioeconomic modeling suggested that the fishery required a 30% reduction in effort to achieve the MEY target. In working towards this target, NORMAC recommended a 25% reduction in the value of the gear SFR, which came into effect in 2005.

Subsequently the Commonwealth Government Structural Adjustment Package removed 42 B Class SFRs and approximately 30% of the effective effort from the Northern Prawn Fishery (NPF). The fishery is now composed of 52 vessels which is the level estimated by Australian Bureau of Agricultural and Resource Economics to maximise the economic yield of the NPF. The industry has formed an industry company 'NPF Industry Pty Ltd' that incorporates around 93% of the fishery gear SFR holders.

Species

The Fishery targets nine commercial species of prawns including white banana (*Fenneropenaeus merguiensis*), red-legged banana (*F .indicus*), brown tiger (*Penaeus esculentus*), grooved tiger (P. *semisulcatus*), blue endeavour (*Metapenaeus endeavouri*), and red endeavour (*M. ensis*). Scampi, squid, scallops and bugs are also taken as by-product. Note scampi is a target species under the Plan (although it is taken as byproduct)

The fishery is split into two seasons. For 2007, the seasons were from 7 April to 2 June (Banana season) and from 1 August to 28 November (Tiger season) respectively.

Data Collection Program

NPF operators are required to complete the 'Northern and Torres Strait Prawn Fisheries Daily Fishing Log' (NP15) on a daily basis. Approximately 13 operators in the Banana and Tiger season used electronic logbook reporting in 2007. Information reported in the electronic logbook data is included in this data summary.

Methods Used For Preparing Data Summary

The data used to prepare the Northern Prawn Fishery Data Summary is comprised of logbook information (NP15 and E-log) submitted by NPF skippers and the seasonal landing returns (SLR-T01) completed by SFR holders. This information is stored at AFMA on the Northern Prawn, Kimberley Prawn and Torres Strait Prawn database.

The data used in this summary was extracted during April 2008 after making every effort to reconcile the data provided by skippers with that obtained from vessel owners. This was to ensure that the logbook data and the landings figures approximated each other as closely as possible. A total of 38 vessels from a pool of 51 vessels had catches from logbooks totaling within 10% of the catch recorded in the landing returns for banana and tiger prawns. This data contains all log sheets and landings data received at the time of this extraction.

Over the entire fleet, the logbook figures for banana and tiger prawns were lower than the landings figures (6.8% and 0.9% respectively). For endeavour prawns, the logbook figures were slightly lower than the landings (0.3%). The logbook figures for king prawns were lower than the landings by 4.4%.

The catch and effort estimates in Table 1, Figure 2 and Figure 6 were derived from a combination of logbook and landings figures. The remainder of the tables and figures in the summary represent logbook data only. This may cause discrepancies between totals. Discrepancies may also occur due to rounding.

Banana and Tiger Prawn Fishery Components

The fishery statistics have been split into banana and tiger prawn fishery components according to the composition of the catch in logbook records. If half or more of a vessel's daily catch was banana prawns or there was no prawn catch and the vessel was fishing, the vessel was defined as operating in the banana prawn fishery on that day; otherwise it was defined as operating in the tiger prawn fishery. Fishing days where vessels have been searching, but have not supplied details of the area searched, have not been included in the effort figures.

Banana prawn fishery catch is the catch of all species (bananas + tigers + endeavours + kings) when a vessel is defined as fishing in the banana prawn fishery. Likewise, tiger prawn fishery catch is the catch of all species when a vessel is defined as operating in the tiger prawn fishery.

Catch and Effort Data for the Northern Prawn Fishery

Coverage

The 2007 NPF seasons were from 7 April to 2 June and 1 August to 28 November. There were 57 days available to fish during the first season and 120 during the second season (a total of 176), which was 44 days more than 2006. The increased number of fishing days in 2007 was due to the extension of the second season by approximately six weeks. Total days fished by all vessels in 2007 for the first season, was 2,696 days and 4,829 day for the second season compared to 3,283 and 6,983 in 2006 respectively. The reduction in the number of days fished by the fleet corresponds with the reduction in the NPF fleet between 2006 and 2007 following the Commonwealth structural adjustment.

Catch

The total NPF prawn catch for 2007 was 4,310 t, compared with 5,310 t in 2006 (Table 1). The catch of banana prawns decreased compared to the previous year by 7% to 2,901 t. The catch of tiger prawns decreased by 34% from 1,802 t in 2006 to 1,192 t in 2007. Endeavour prawns decreased by 46% from 363 t in 2006 to 196 t in 2007 (Figure 2).

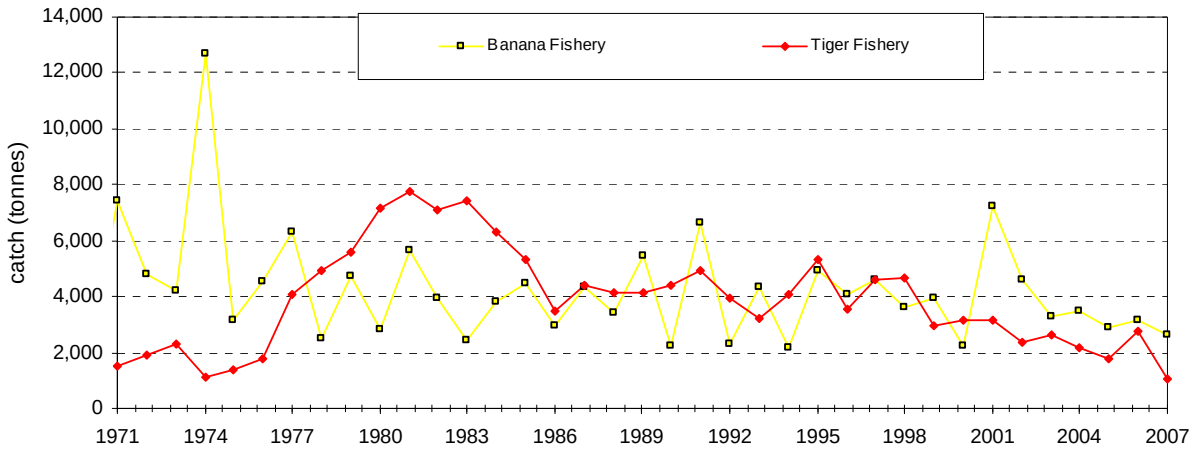

Figure 2: Catch in the banana and tiger prawn fisheries between 1970 and 2007.

Table 1: Annual reconciled landings, effort and vessel number in the NPF from 1970 to 2007.

year	banana (t)	tiger (t)	endeavour (t)	king (t)	total catch (t)	no. of vessels	banana fishery effort (days)	tiger fishery effort (days)
1970	1702	1138	417	0	3257	191	2041	5818
1971	7364	1183	400	0	8948	169	5571	6057
1972	4801	1380	472	0	6654	180	4327	7380
1973	4226	1672	594	0	6492	217	4917	7362
1974	12711	666	434	4	13815	196	7537	3439
1975	3160	973	444	6	4583	107	5361	6010
1976	4519	1118	675	5	6319	145	7238	6660
1977	6345	2900	1125	28	10398	193	7257	11673
1978	2535	3599	1240	82	7456	237	5569	18749
1979	4775	4218	1213	94	10300	240	7328	17791
1970-'79average	*5214*	*1885*	*701*	*22*	*7822*	*188*	*5715*	*9094*
1980	2835	5124	1891	111	9964	269	8391	30594
1981	5672	5559	2073	95	13400	286	11524	31895
1982	3875	4891	2124	144	11036	271	8751	32956
1983	2382	5751	1488	207	9831	254	6856	34551
1984	3770	4525	1714	83	10095	252	5932	32447
1985	4469	3592	1671	77	9811	231	6946	26516
1986	2935	2682	748	85	6451	238	7132	26669
1987	4257	3617	772	65	8713	234	7954	22478
1988	3381	3458	669	81	7591	222	6655	26264
1989	5466	3173	909	85	9636	223	7439	27036
1980-'89average	*3904*	*4237*	*1406*	*103*	*9653*	*248*	*7758*	*29141*
1990	2221	3550	735	128	6636	200	5044	25525
1991	6605	3987	879	81	11554	172	6515	20744
1992	2254	3084	880	47	6267	170	5132	21789
1993	4292	2515	733	35	7572	127	6299	16019
1994	2157	3162	872	72	6263	128	4955	18592
1995	4961	4125	1150	58	10294	125	4880	16834
1996	4078	2311	1235	41	7665	127	5525	16635
1997	4587	2694	1870	51	9202	129	5476	15385
1998	3569	3218	1322	20	8123	130	5301	18003
1999	3904	2136	885	21	6947	129	5639	12675
1990-'99average	*3863*	*3078*	*1056*	*55*	*8052*	*144*	*5477*	*18220*
2000	2195	2190	958	13	5335	121	3697	12736
2001	7245	1983	1157	4	10389	118	6247	10440
2002	4577	1943	411	5	6936	114	4148	8718
2003	3238	2222	435	4	5898	97	4114	8503
2004	3520	1767	396	3	5686	96	3985	7793
2005	2901	1744	281	20	4946	89	3364	7967
2006	*3117*	*1802*	*363*	*28*	*5310*	*77*	*3283*	*6983*
2007	***2901***	***1192***	***196***	***20***	***4310***	***51***	***2696***	***4829***
2000-07 average	*3680*	*1814*	*524*	*12*	*6532*	*95*	*3942*	*8496*
1970-2007 average	4191	2803	943	50	7987	173	5816	16645

* note: Data is extracted from Seasonal Landings Reports.

Catch by week

Figures 3 (a), (b) and (c) show the catch of banana and tiger prawns by week during 2005, 2006 and 2007. Unlike the 2005 banana prawn season, the highest catches of banana prawns were recorded in the third week of the 2006 banana season and the highest catches in 2007 were recorded in the first week, while Tiger prawn catches were typically highest in August and September.

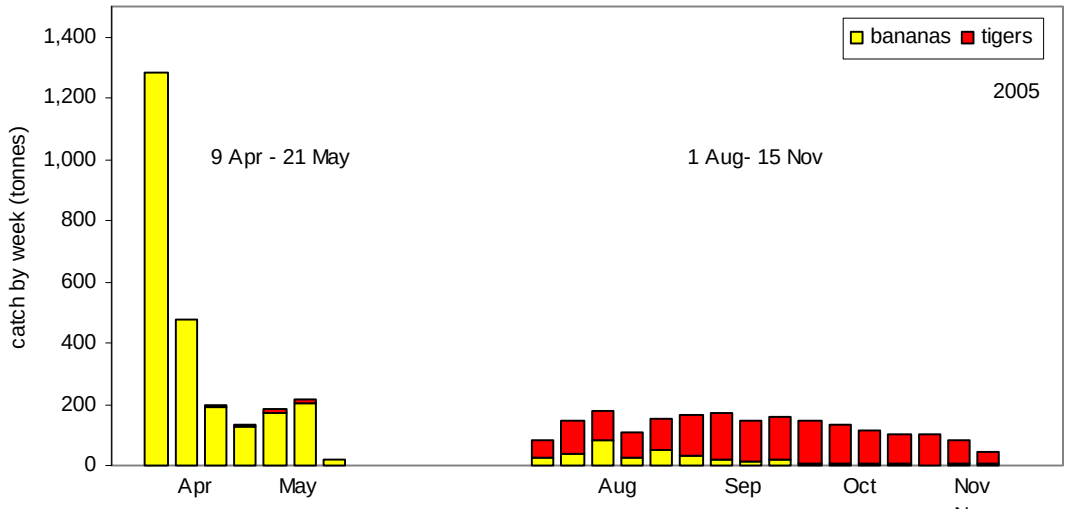

Figure 3a: Weekly catches of banana prawns and tiger prawns (t) in the NPF in 2005.

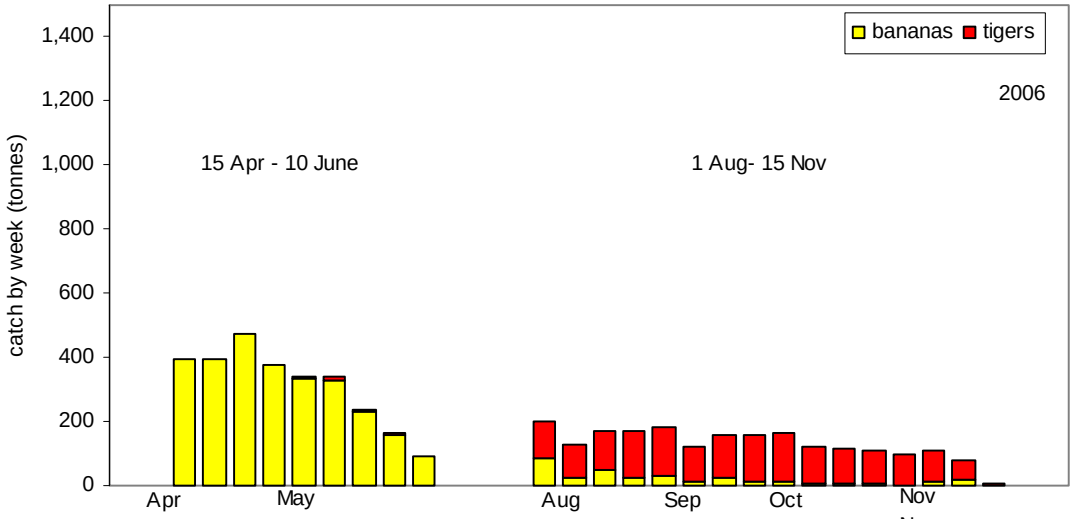

Figure 3b: Weekly catches of banana prawns and tiger prawns (t) in the NPF in 2006.

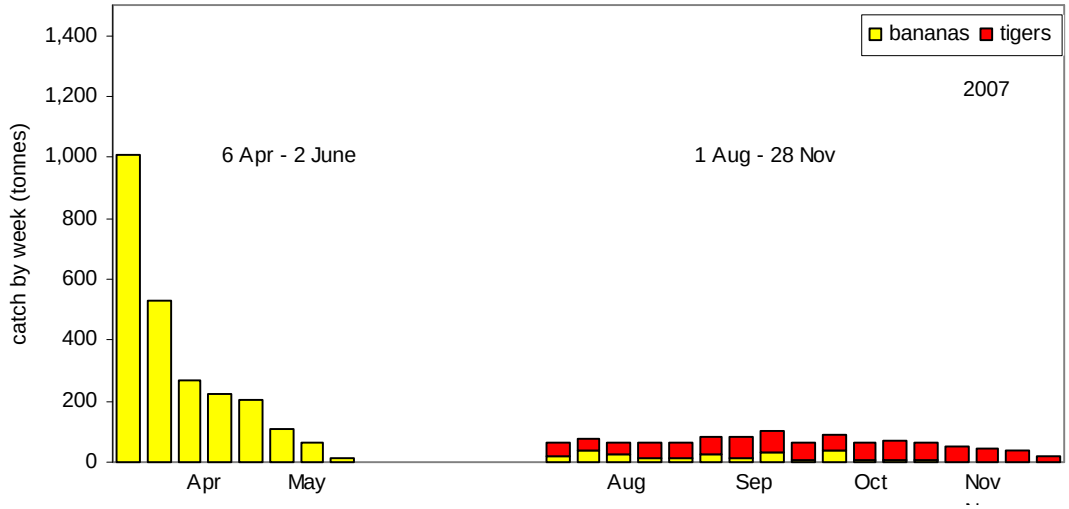

Figure 3c: Weekly catches of banana prawns and tiger prawns (t) in the NPF in 2007.

Effort

Nominal and effective effort

Nominal effort is the number of days recorded by skippers in their logbooks. Effective effort applies only to the tiger prawn fishery based on the assumption that there has been an 'effort creep' (an increase in effectiveness of the gear utilised). A number of different approaches to effort creep are being used by NPRAG, including using an average 5% per year as well as variable effort creeps. As in previous years, for the purpose of preparing this report we have used 5%. Nominal effort in the banana fishery decreased by 587 days (18%) despite a 2 week season extension. In the tiger fishery, nominal effort decreased by 2,154 days (30%) (Figure 4). As the 2006 and 2007 tiger prawns seasons were of similar lengths the reduction in nominal effort is a result the reduced fleet size following the Commonwealth structural adjustment in 2006.

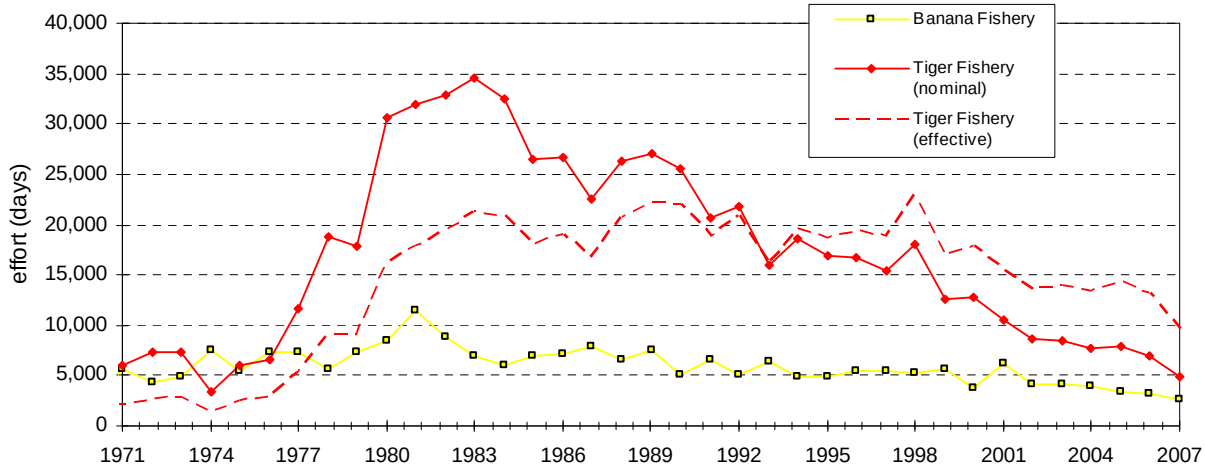

Figure 4: Effort in the banana and tiger prawn fisheries in the NPF between 1971 and 2007.

Catch Rate

It is worth noting that there have been a number of gear reductions implemented in the fishery over time. The most recent was a 25% reduction in headrope length that came into effect at the start of the first season in 2005. As a result "catch rate", measured in terms of Catch Per Unit Effort (CPUE) being tonnes per day may be affected. While it is also recognised that trends in CPUE don't necessarily reflect trends in stock abundance. The banana fishery catch rate increased slightly from 0.96 t per day in 2006 to 0.98 t per day in 2007. The nominal catch rate for the tiger fishery decreased to 0.22 t per day for 2007 from 0.31 t per day in 2006, while the effective catch rate decreased to 0.11 t per day in 2007 from 0.21 t per day in 2006 (Figure 5).

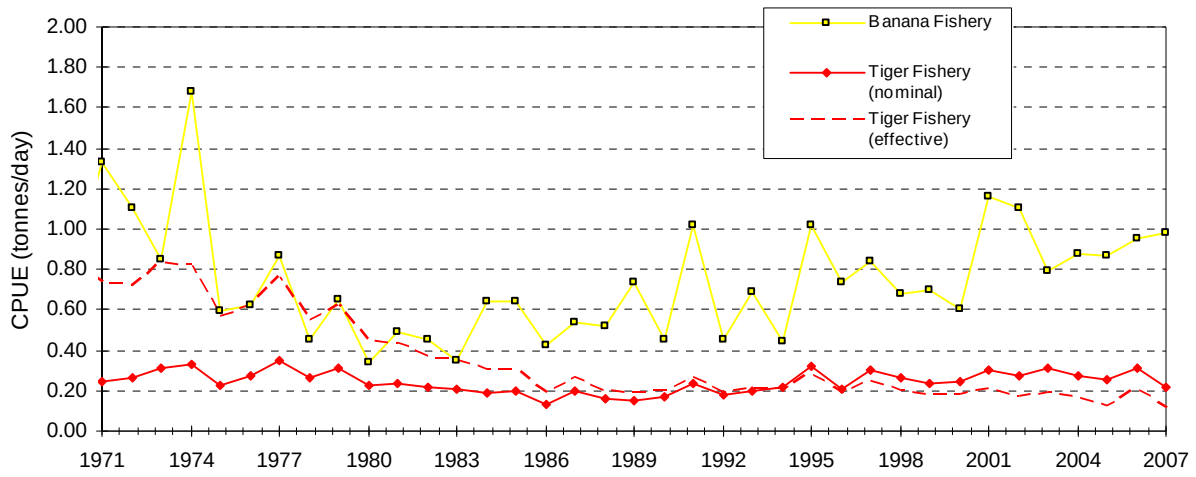

Figure 5: Catch rate in the banana and tiger prawn fisheries between 1971 and 2007.

Catch, effort and catch rate by month

The highest catches during the 2007 banana season were obtained during April whilst the highest catches during the 2007 tiger season were obtained during September (Table 2).

Table 3 shows effort by month in the banana and tiger fisheries for 2007. Catch rates (t/day) for 2007 in the banana season were highest in April and lowest in June. Tiger fishery effort rates were highest in October and lowest in November (Table 3).

Monthly catch rates (CPUE) for banana prawns were highest in April during the banana prawn season and highest in April during for tiger prawns (Table 4). Monthly catch rates for tiger prawns were highest in October for nominal effort and in September for effective effort during the tiger prawn season.

Table 2: Monthly catch by species in 2007.

Catch (t)	***Apr***	***May***	***Jun***	***Aug***	***Sep***	***Oct***	***Nov***	***Total***
banana	1,855	540	0.4	103	78	60	7	2,643
tiger	0.1	0.4		195	276	243	147	862
endeavour	0.1	0.1		79	33	35	47	194
king				17	1	0.2	0.2	18.4
Total	1,855.2	540.5	0.4	394.0	387.8	338.2	201.2	3,718

Table 3: Monthly effort in the banana and tiger prawn seasons in 2007.

Effort (days)	***Apr***	***May***	***Jun***	***Aug***	***Sep***	***Oct***	***Nov***	***Total***
Banana Season	1086	996	8	192	163	185	65	2,696
Tiger Season (nominal)	1	16	1	1,179	1,303	1,319	1,010	4,829
Tiger Season (effective)	2	31	2	2,334	2,580	2,612	2,000	9,561
Total	1,089	1,043	11	3,705	4,046	4,116	3,075	17,085

Table 4: Monthly catch rate for all species in the banana and tiger prawn seasons in 2007.

CPUE (tonne/day)	*Apr*	*May*	*June*	*Aug*	*Sep*	*Oct*	*Nov*
Banana Season	1.7 1	0.54	0.05	0.55	0.47	0.33	0.13
Tiger Season (nominal)	0.11	0.18	0.01	0.24	0.24	0.21	0.19
Tiger Season (effective)	0.05	0.09	0.00	0.12	0.12	0.11	0.10

Vessel and gear information

Vessel length

The most common NPF vessel length in 2007 was between 22.0 - 22.9 metres (Figure 6).

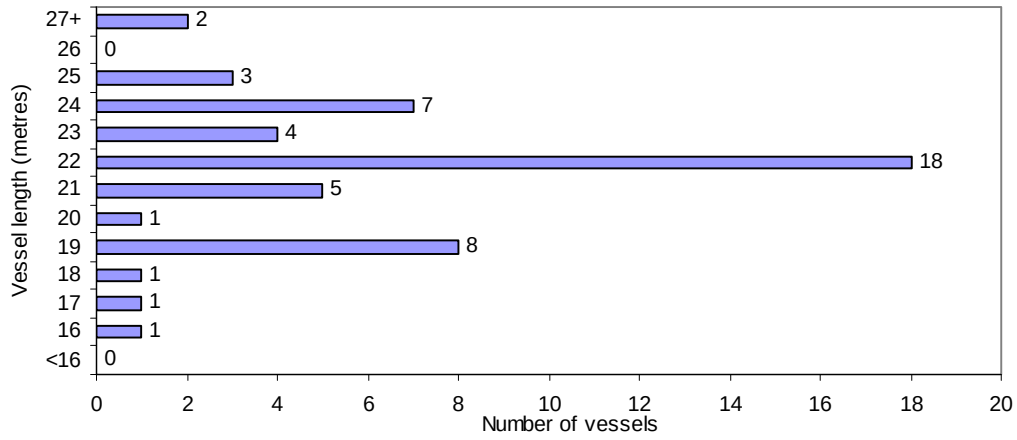

Figure 6: Frequency of vessel lengths in the NPF fleet in 2007.

Distribution of catch by vessel

The highest distribution of catch in the first season of 2007 was in the range between 40-49 t categories with 16 vessels (Figure 7a). Forty One percent caught above this amount and 26% caught 39 t or below (Figure 7a). In the second season, 21 vessels (41%) caught between 30-39 t, 28 vessels (55%) caught below 29 t and the remaining 2 vessels (4%) caught above 39 t (Figure 7b).

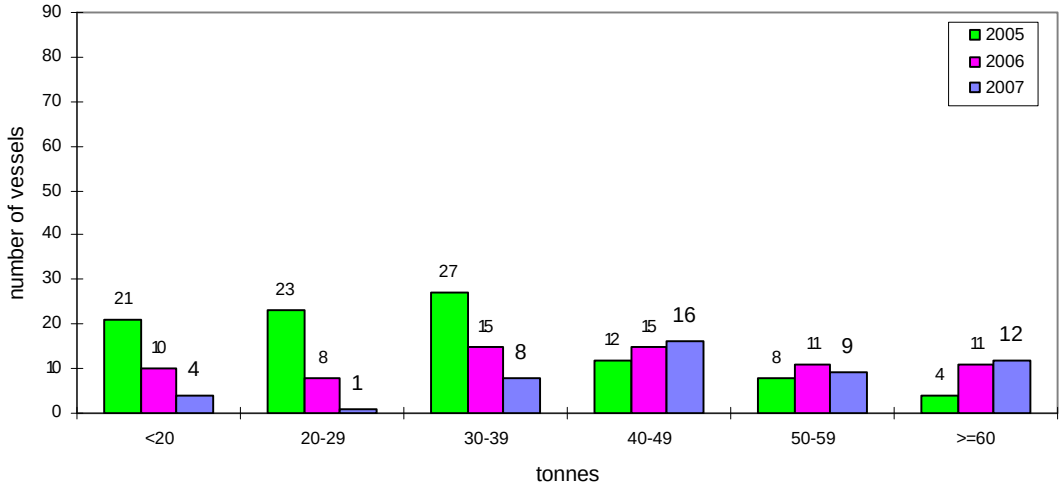

Figure 7a: Distribution of total catch in the banana prawn season, 2005-2007.

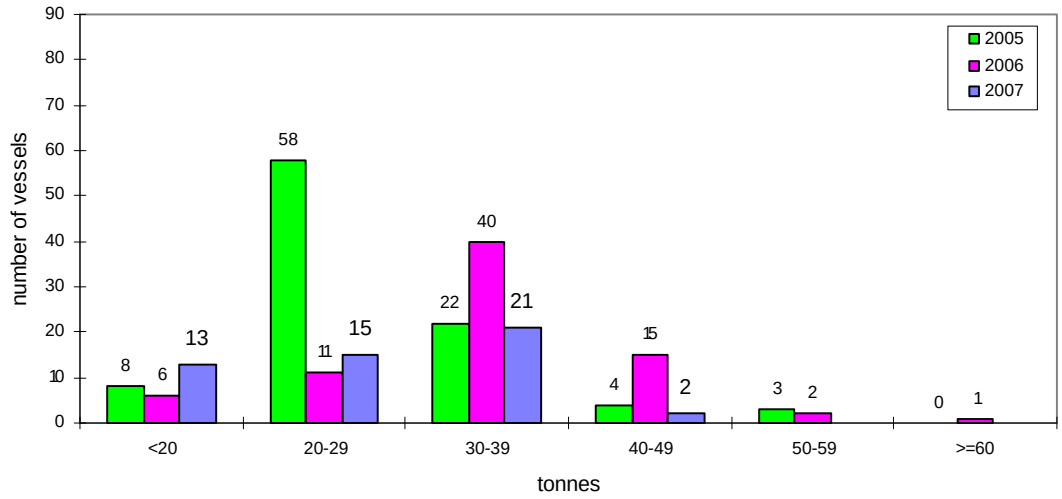

Figure 7b: Distribution of total catch in the tiger prawn season, 2005-2007.

Average catch per vessel

The average catch per vessel for all prawns rose to 73 t (6%) per vessel in 2007 (Figure 8a). The average catch per vessel for banana prawns in 2007 increased to 52 t 30% per vessel (Figure 8b), while that of tiger prawns decreased to 17 t (26%) per vessel in 2007 (Figure 8c).

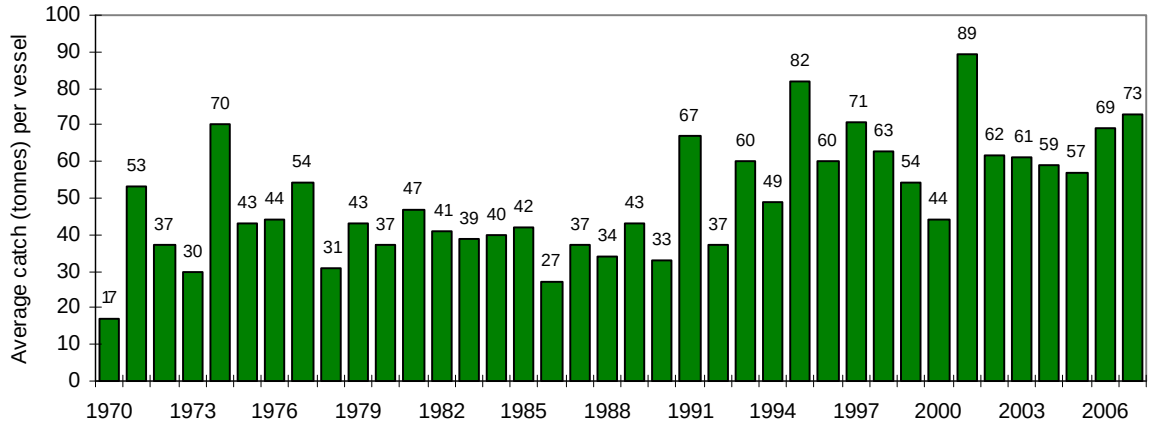

Figure 8a: Average total catch of all prawns per vessel in the NPF from 1970 to 2007.

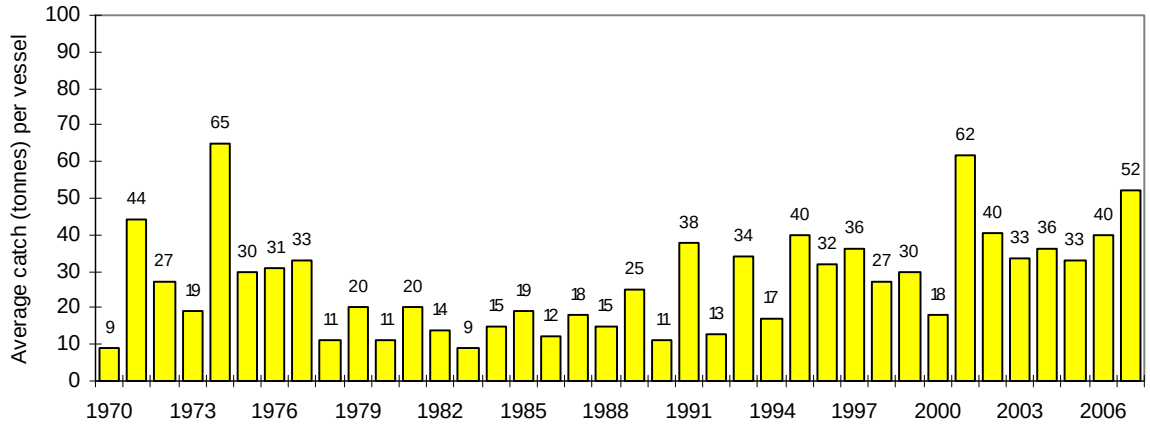

Figure 8b: Average total catch of banana prawns per vessel in the NPF from 1970 to 2007.

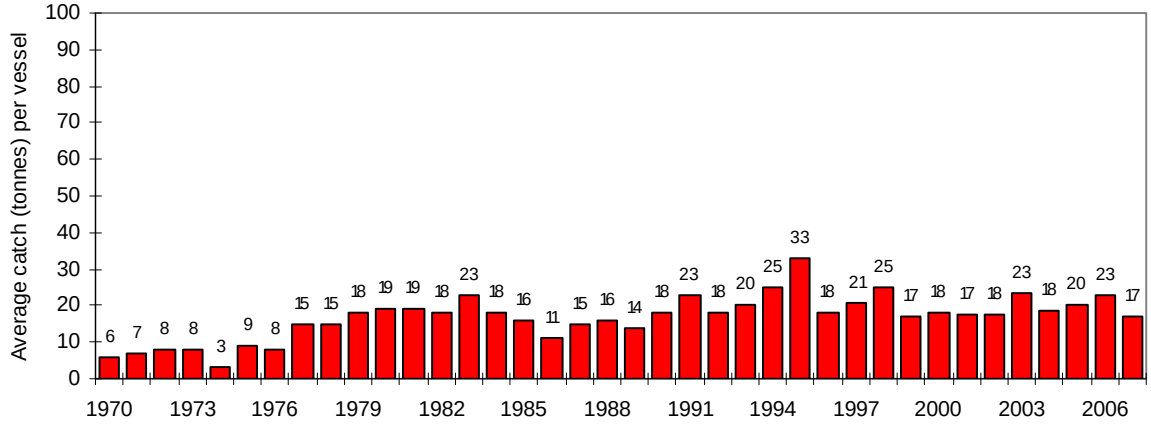

Figure 8c: Average total catch of tiger prawns per vessel in the NPF from 1970 to 2007.

Fishing Gear

Total tiger headrope in 2007 decreased to 1135 fathoms (2 km) compared to 1524 (2.79 km) in 2006 (Figure 9) as a result of the reduction in the number of trawlers. The average headrope length per trawler in 2007 was 22.25 fathoms (40.7 metres) compared with 20.1 fathoms (36.7 metres) in 2006 (Figure 10).

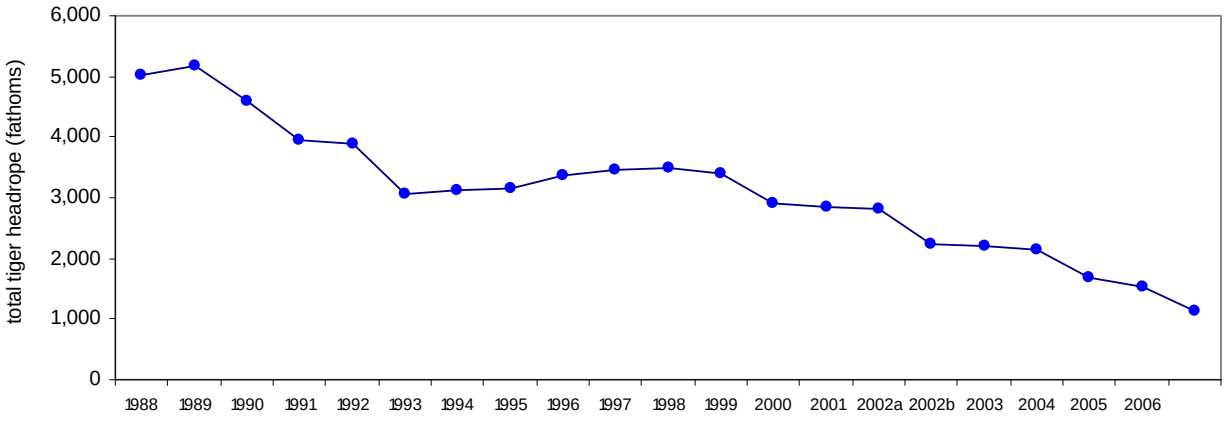

Figure 9: Total tiger prawn season headrope length in the NPF from 1988 to 2007.

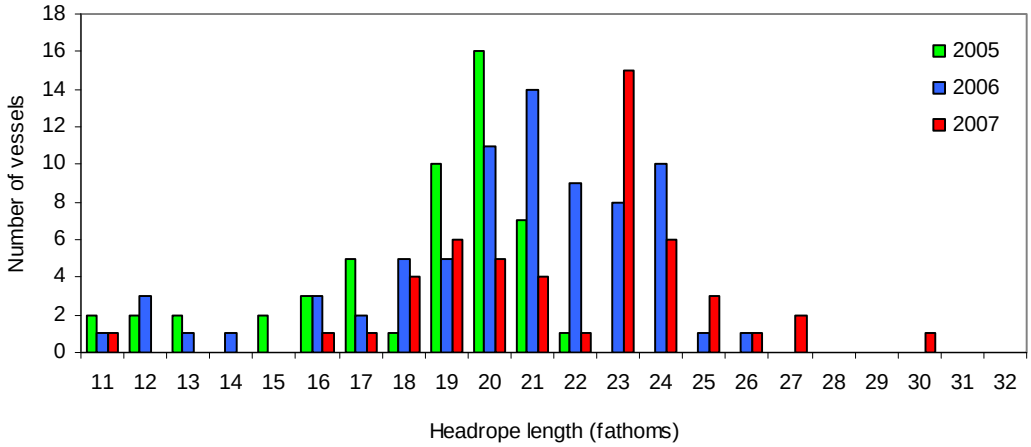

Figure 10: Frequency of headrope length for the tiger prawn season in the NPF from 1988 to 2007.

Catch and effort by statistical area in the NPF

All areas

Catch and effort has been partitioned into the 15 statistical areas illustrated below (Figure 11) and is detailed on the following pages. The highest banana catches were recorded in the Mitchell area with 455 t (Figure 12). The highest catch of tiger prawns was recorded in the Groote area with 307 t (Figure 13).

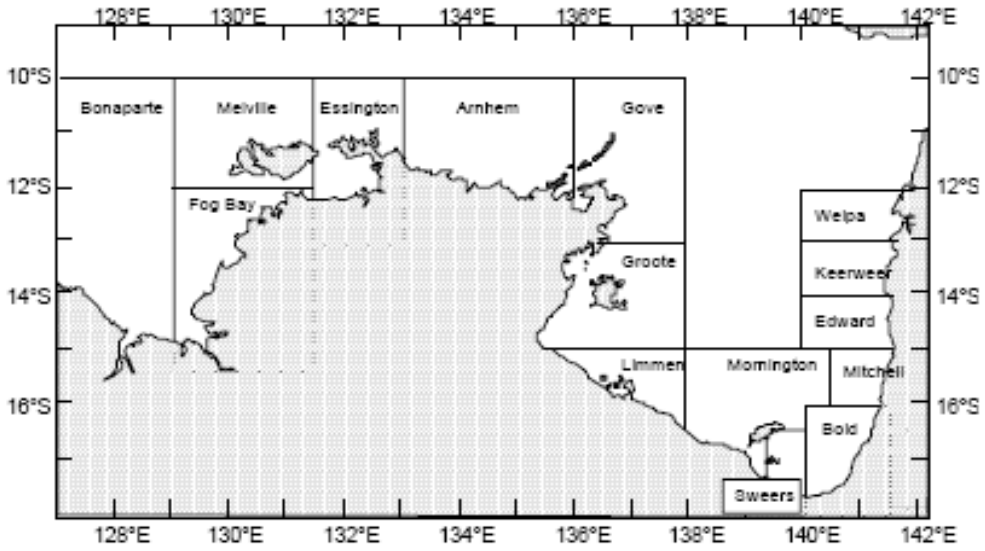

Figure 11: Statistical areas of the NPF.

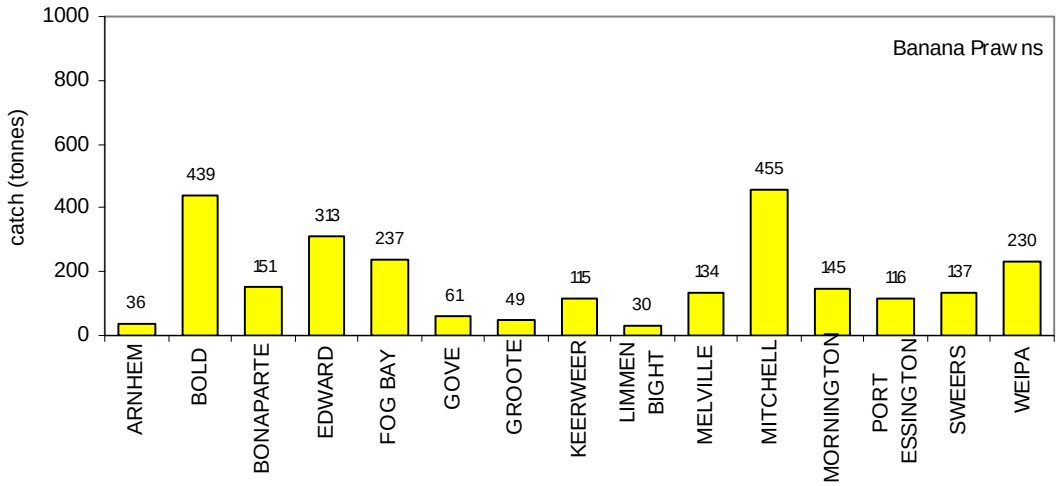

Figure 12: Total catch of banana prawns for each statistical area of the NPF in 2007.

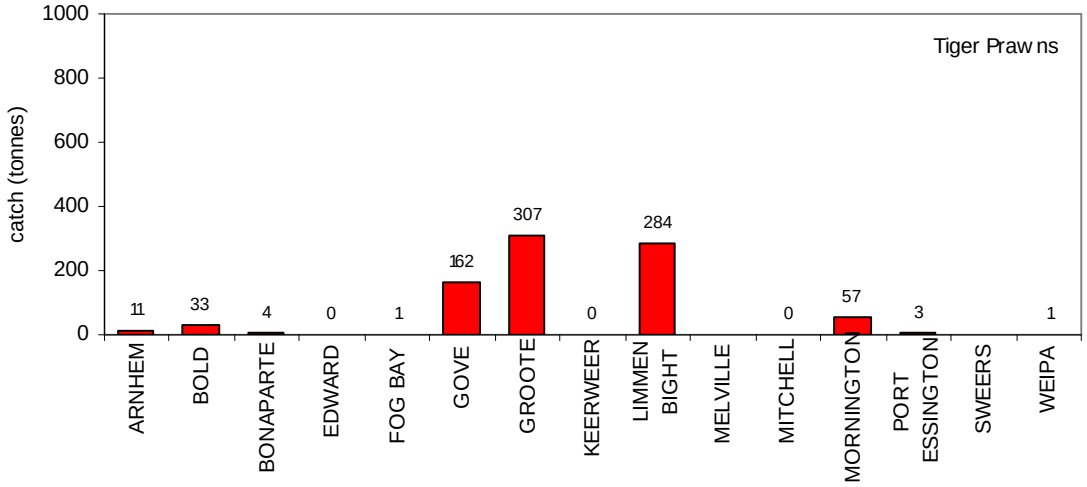

Figure 13: Total catch of tiger prawns for each statistical area of the NPF in 2007.

Weipa

Banana prawn catches decreased from 391 t in 2006 to 230 t in 2007. Tiger prawn catches decreased from 6 t in 2006 to 1 t in 2007 and the catch of endeavour prawns decreased from 3 in 2006 to 0 t in 2007 (Figure 14). Banana prawns dominated the catch in this area during 2007, comprising 100% of the catch (Figure 15).

Effort in the banana prawn fishery decreased from 342 days in 2006 to 201 days in 2007 (Figure 16a). CPUE of banana prawns did not change from the 2006 season (Figure 16b). Effort in the tiger prawn fishery decreased from 53 days in 2006 to 12 in 2007 (Figure 16a). Nominal and effective CPUE decreased from 0.113 and 0.063 t per day, respectively in 2006 to 0.083 and 0.046 t per day, respectively in 2007 (Figure 16c).

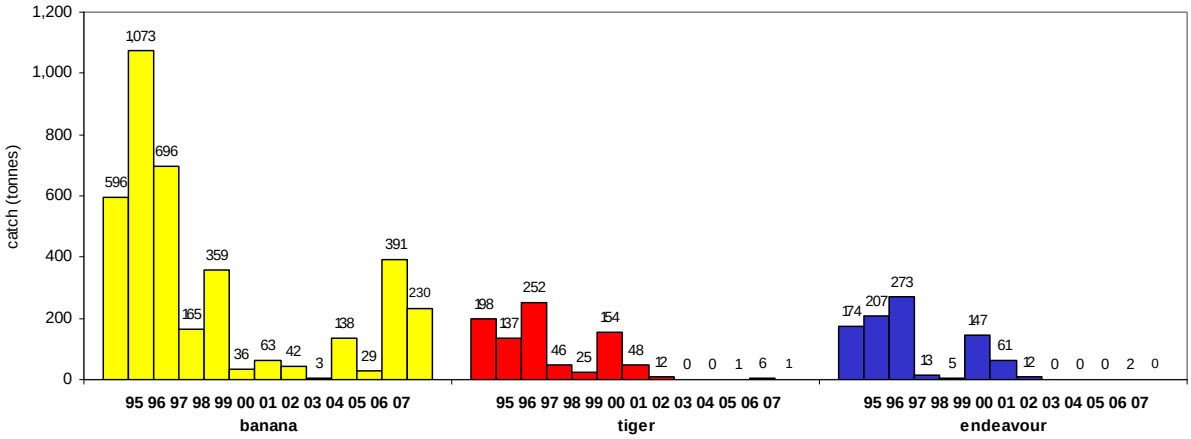

Figure 14: Catch by species in the Weipa area between 1995 and 2007.

Figure 15: Percentage catch of prawn species in the Weipa area during 2007 (a) and percentage catch of prawn species in the Weipa area from 1993 to 2007 (b).

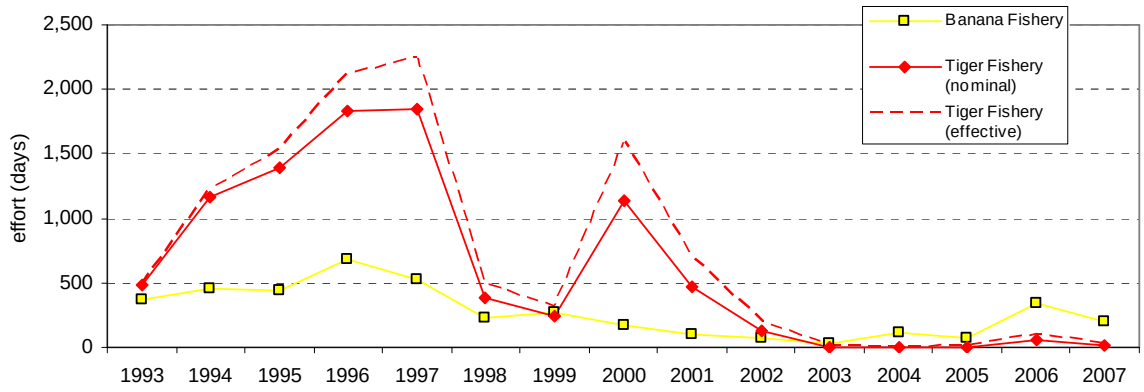

Figure 16a: Effort for the banana and tiger prawn fisheries in the Weipa area between 1993 and 2007.

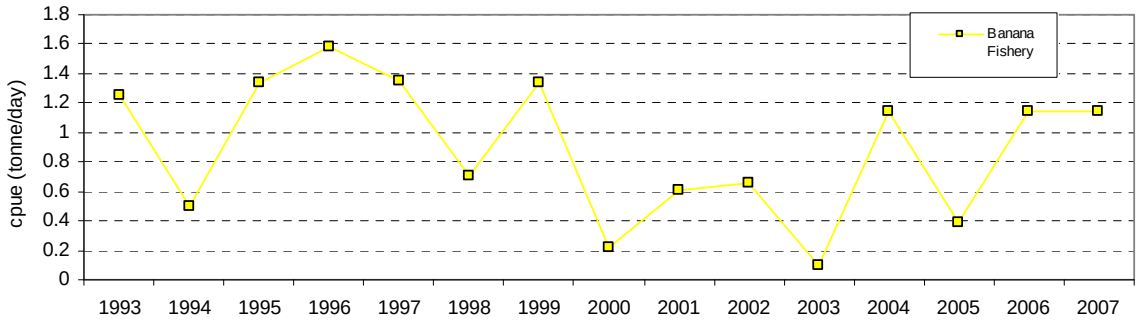

Figure 16b: Catch rate for the banana fishery in the Weipa area between 1993 and 2007.

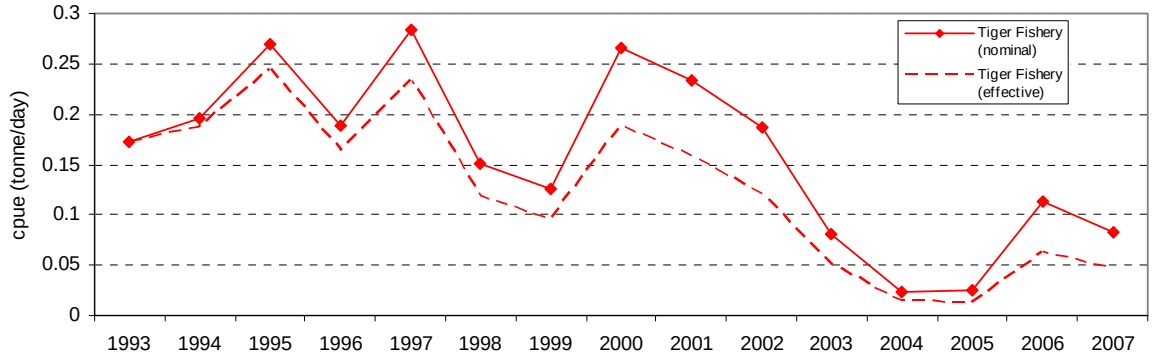

Figure 16c: Catch rate for the tiger prawn fishery in the Weipa area between 1993 and 2007.

Keerweer

Banana prawn catches in the Keerweer area increased from 53 t in 2006 to 115 t in 2007. There were no catches of tiger and endeavour prawns (Figure 17). Banana prawns comprised 100% of the catch in 2007 (Figure 18).

Effort in the banana prawn fishery increased from 61 days in 2006 to 125 in 2007 (Figure 19a). CPUE of banana prawns increased from 0.86 in 2006 to 0.91 t per day in 2007 (Figure 19b). Effort and CPUE in the tiger prawn fishery was zero (Figure 19a, c).

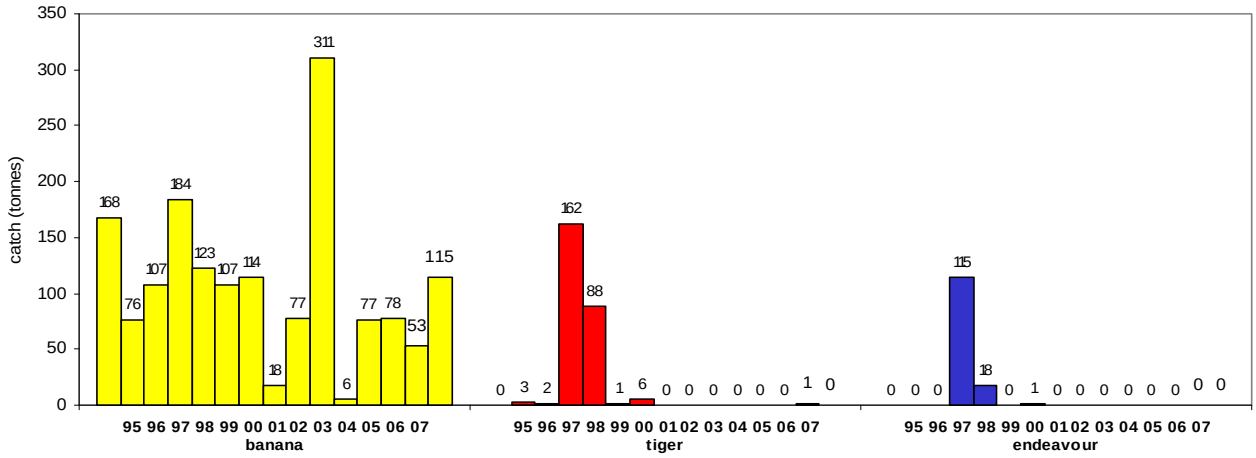

Figure 17: Catch by species in the Keerweer area between 1995 and 2007.

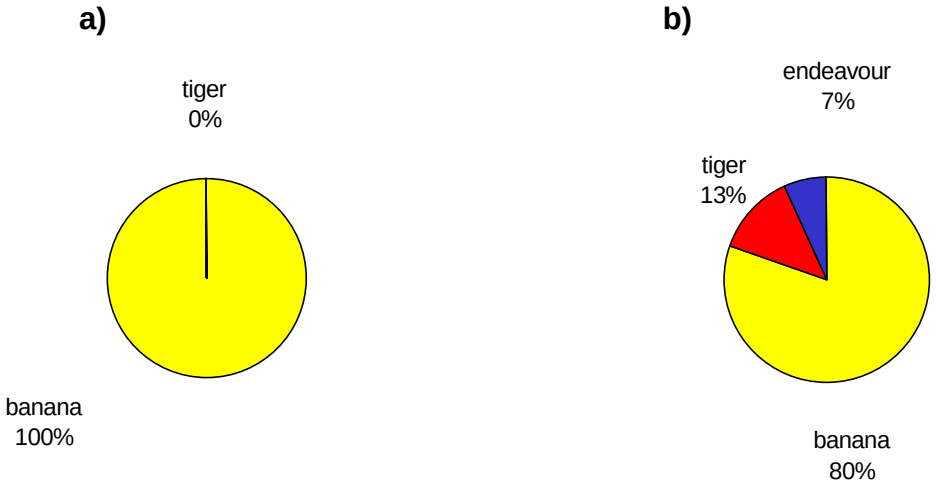

Figure 18: Percentage catch of prawn species in the Keerweer area during 2007 (a) and percentage catch of prawn species in the Keerweer area from 1994 to 2007 (b).

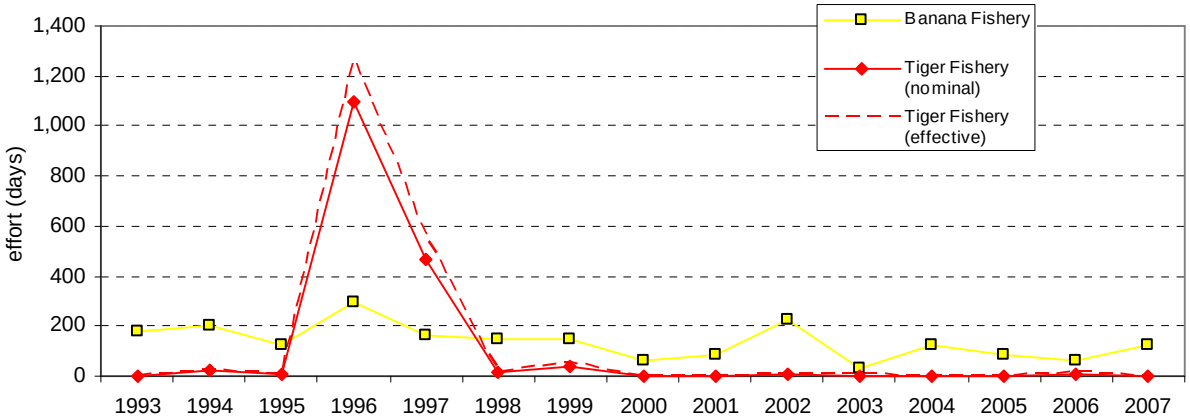

Figure 19a: Effort for the banana and tiger prawn fisheries in the Keerweer area between 1993 and 2007.

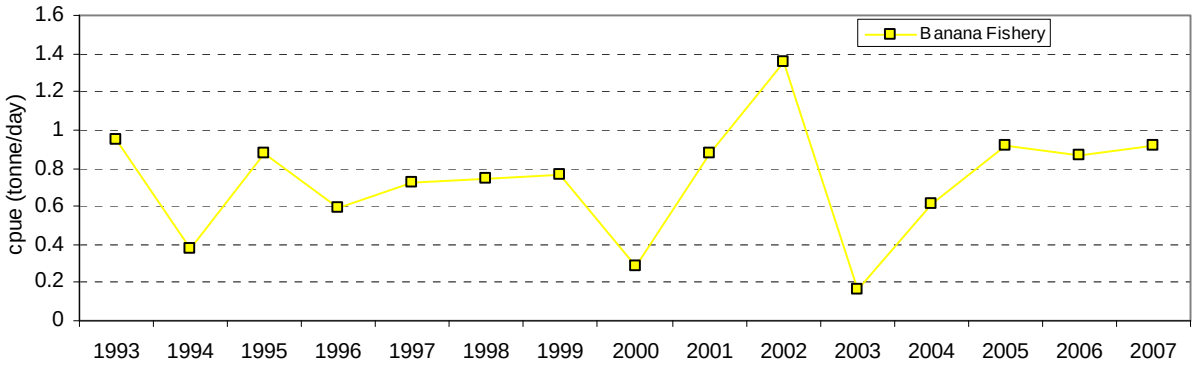

Figure 19b: Catch rate for the banana fishery in the Keerweer area between 1993 and 2007.

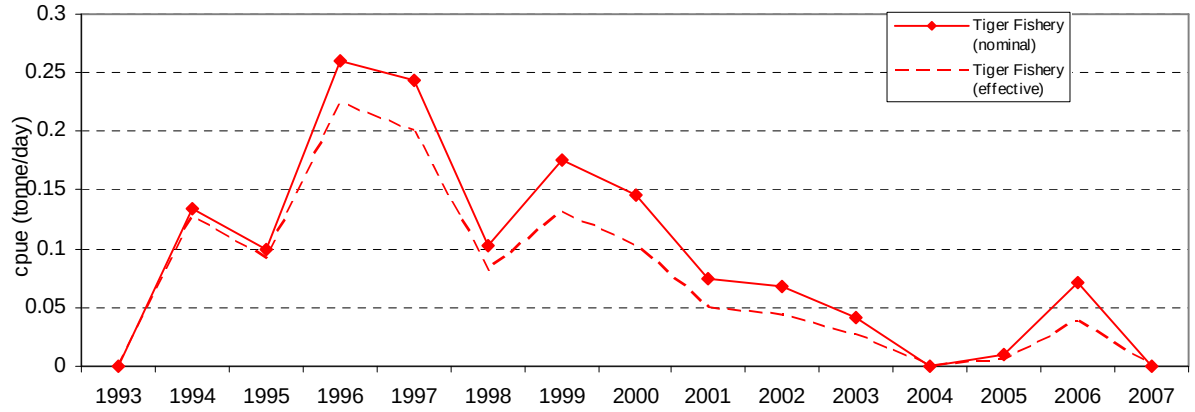

Figure 19c: Catch rate for the tiger prawn fishery in the Keerweer area between 1993 and 2007.

Edward

Banana prawn catches in the Edward area increased from 134 t in 2006 to 313 t in 2007. Tiger and endeavour prawn catches did not show any change (Figure 20). Banana prawns comprised 100% of the catch in 2007 (Figure 21).

Effort in the banana prawn fishery increased from 186 days in 2006 to 285 in 2007 (Figure 22a). CPUE of banana prawns increased from 0.72 t per day in 2006 to 1.1 t per day in 2007 (Figure 22b). Effort in the tiger prawn fishery increased from zero days in 2006 to 1 day in 2007 (Figure 22c). Nominal and effective CPUE increased from zero in 2006 to 0.04 t per day and 0.03 t per day in 2007, respectively (Figure 22c).

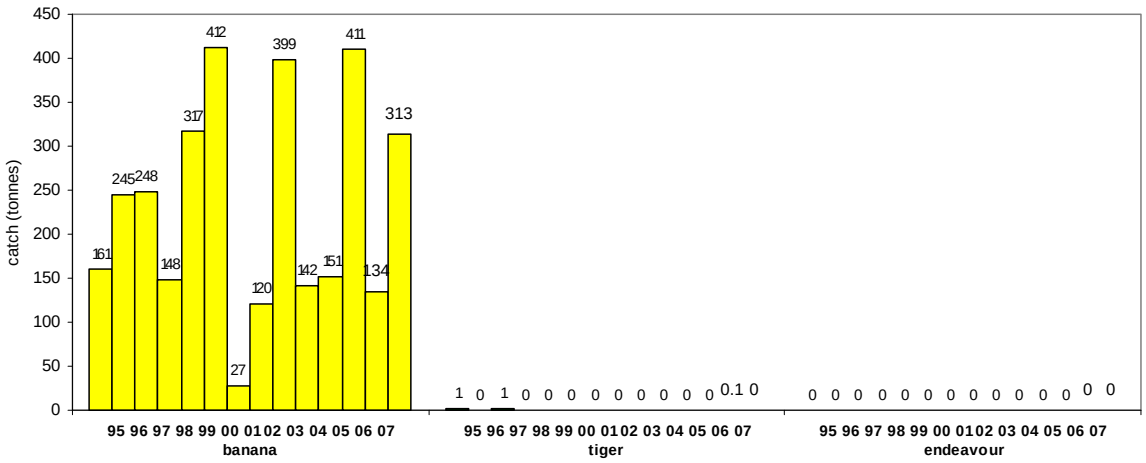

Figure 20: Catch by species in the Edward area between 1995 and 2007.

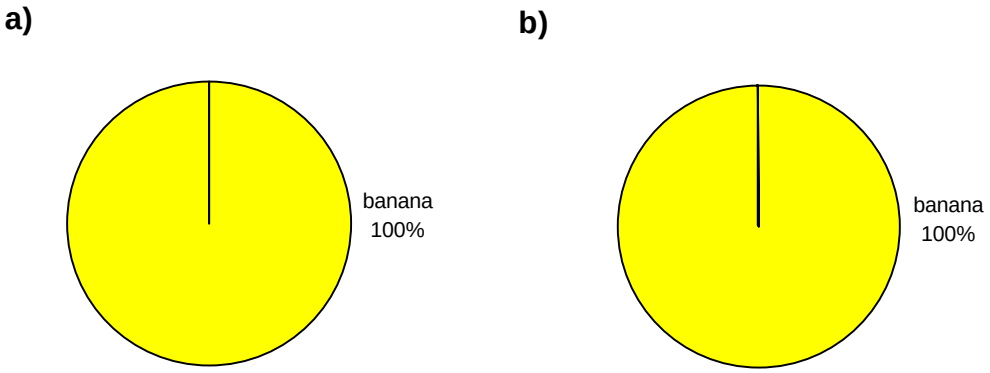

Figure 21: Percentage catch of prawn species in the Edward area during 2007(a) and percentage catch of prawn species in the Edward area from 1993 to 2007(b).

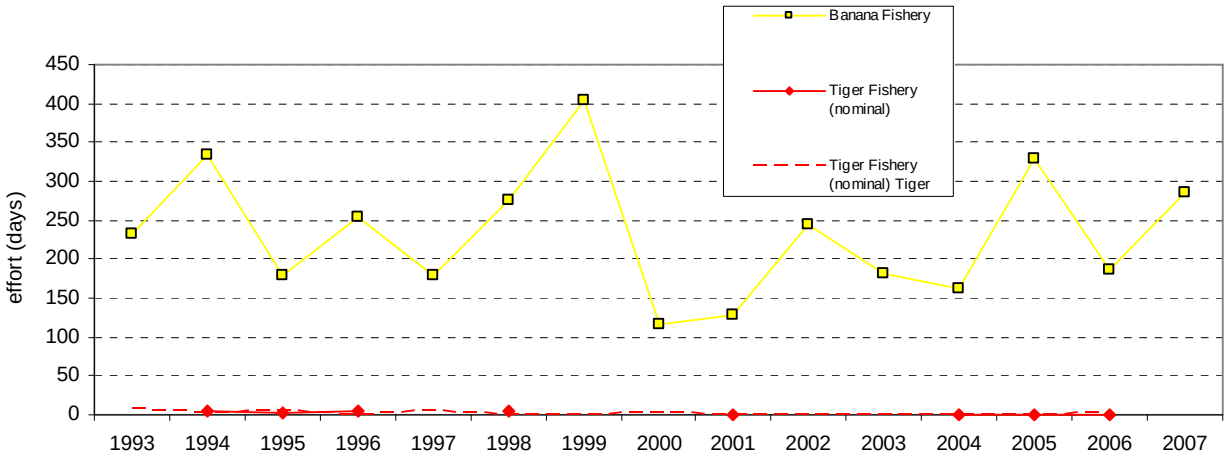

Figure 22a: Effort for the banana and tiger prawn fisheries in the Edward area between 1995 and 2007.

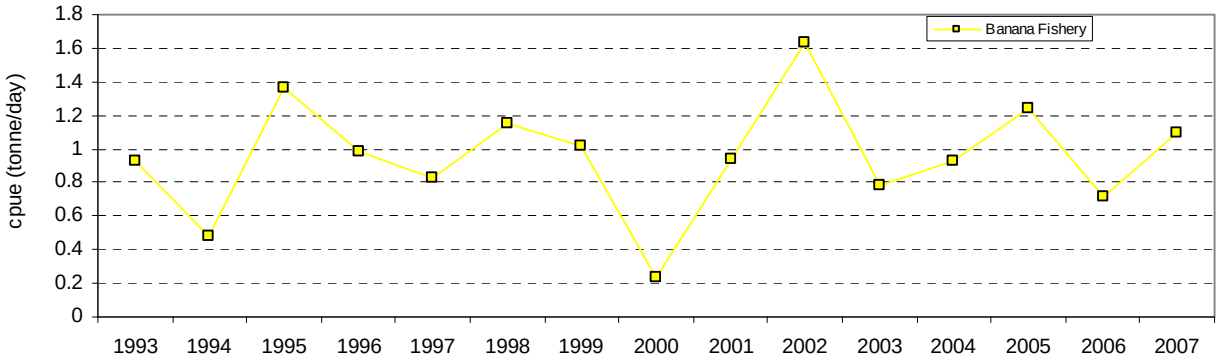

Figure 22b: Catch rate for the banana fishery in the Edward area between 1993 and 2007.

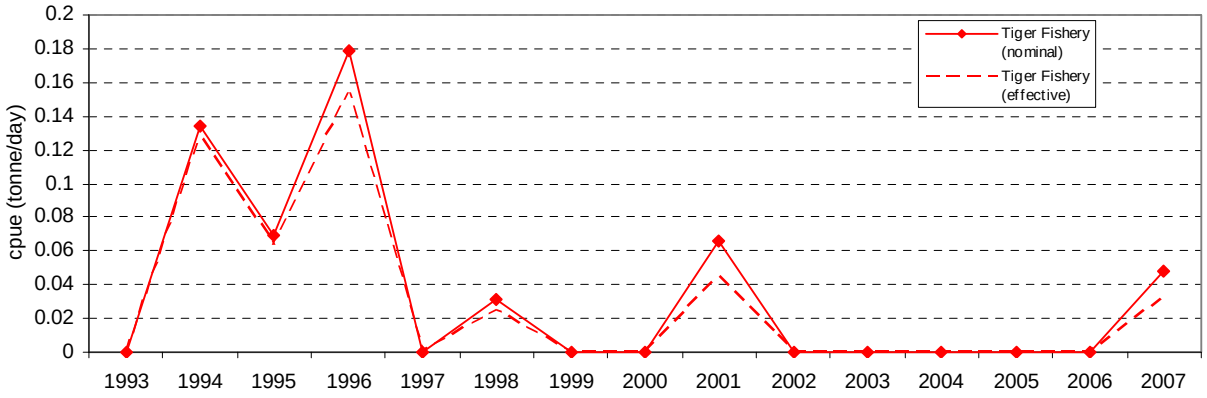

Figure 22c: Catch rate for the tiger prawn fishery in the Edward area between 1993 and 2007.

Mitchell

Banana prawn catches in the Mitchell area increased significantly from 71 t in 2006 to 455 t in 2007. Tiger and endeavour prawn catches did not show any change (Figure 23). Banana prawns comprised 100% of the catch in this area during 2007 (Figure 24).

Effort in the banana prawn fishery increased from 147 days in 2006 to 301 in 2007 (Figure 25a). CPUE of banana prawns increased from 0.48 t per day in 2006 to 1.51 t per day in 2007 (Figure 25b). There was no change in effort and CPUE in the tiger prawn fishery (Figure 25a, c).

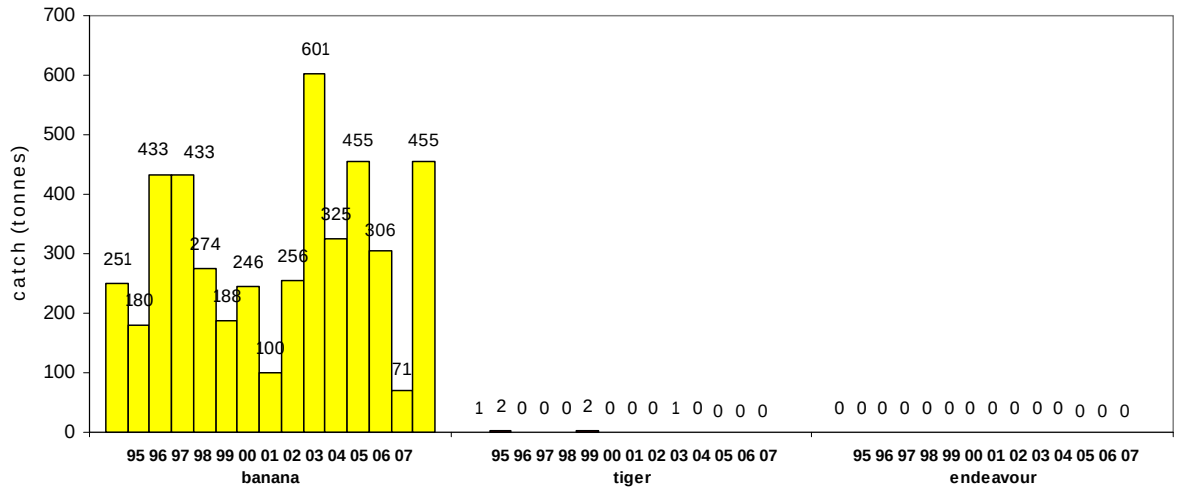

Figure 23: Catch by species in the Mitchell area between 1995 and 2007.

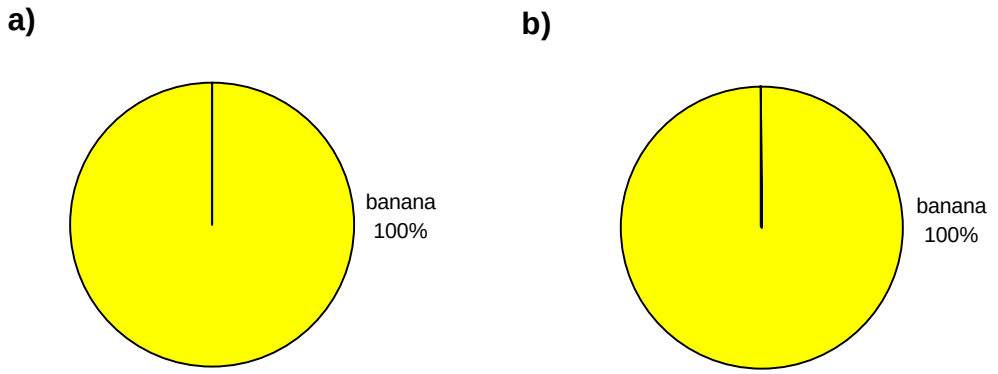

Figure 24: Percentage catch of prawn species in the Mitchell area during 2007 (a) and percentage catch of prawn species in the Mitchell area from 1993 to 2007.

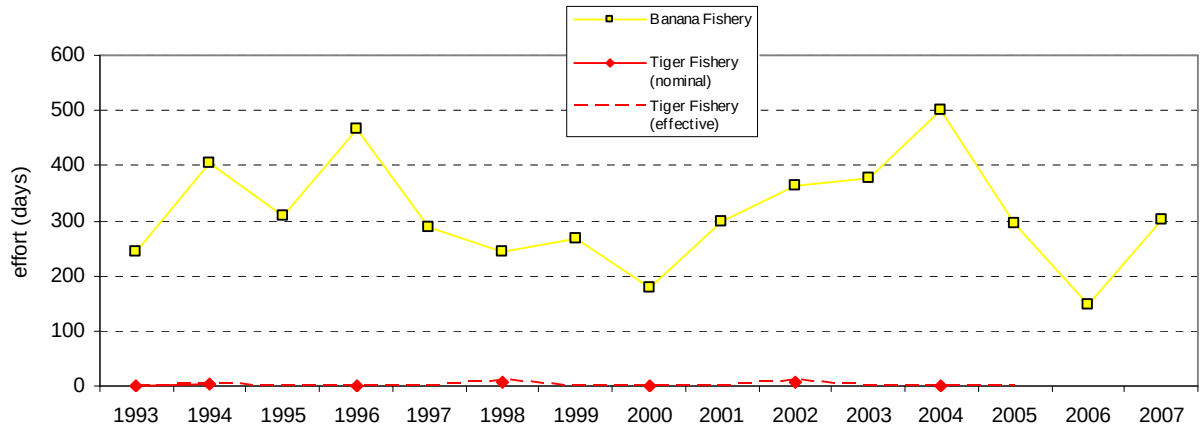

Figure 25a: Effort for the banana and tiger prawn fisheries in the Mitchell area between 1993 and 2007.

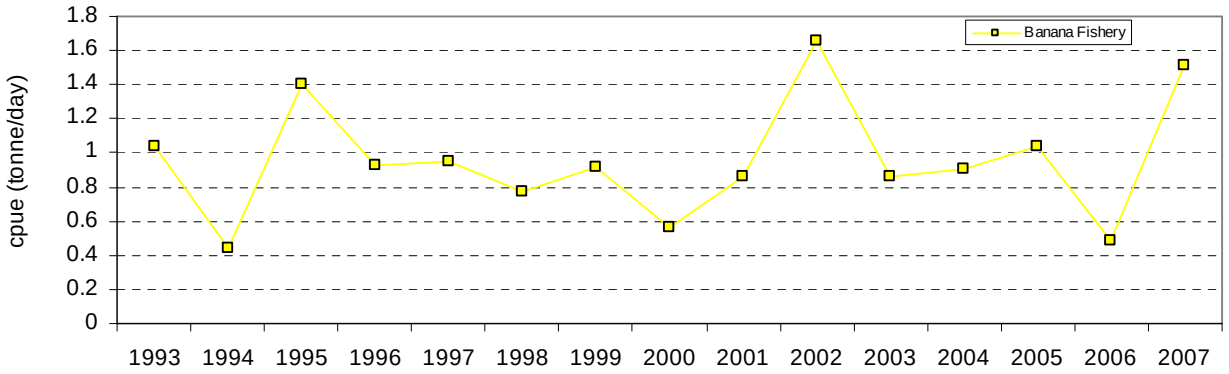

Figure 25b: Catch rate for the banana fishery in the Mitchell area between 1993 and 2007.

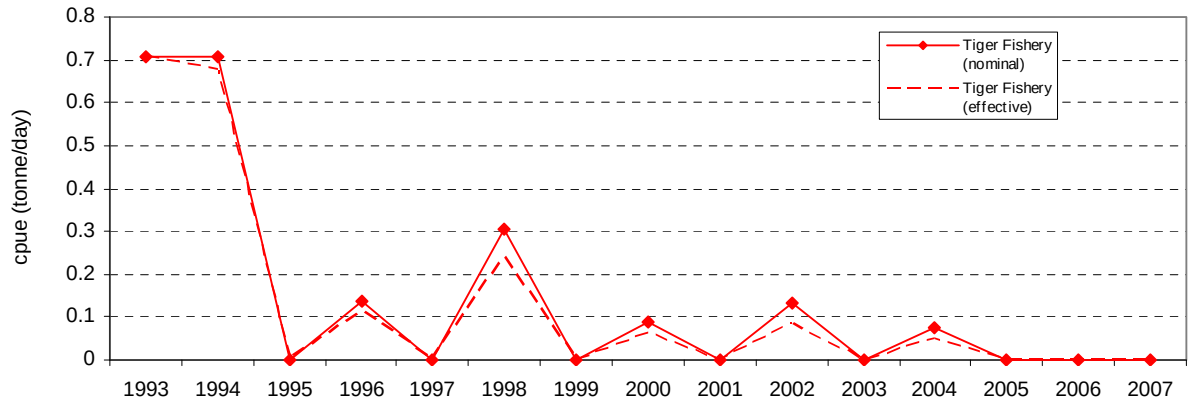

Figure 25c: Catch rate for the tiger prawn fishery in the Mitchell area between 1993 and 2007.

Bold

Banana prawn catches in the Bold area decreased from 479 t in 2006 to 439 in 2007. Catches of tiger prawns increased from 4 t in 2006 to 33 t in 2007 while endeavour prawn catches increased from zero to 7 t in 2007 (Figure 26). Banana prawns dominated the catch in this area, comprising 92% of the catch (Figure 27).

Effort in the banana fishery decreased from 378 days in 2006 to 297 in 2007 (Figure 28a). CPUE of banana prawns increased from 1.27 t per day in 2006 to 1.47 t per day in 2007 (Figure 28b). Effort in the tiger prawn fishery increased from 22 days in 2006 to 129 days in 2007 (Figure 28a). Nominal and effective CPUE increased from 0.2 t and 0.11 t per day in 2006 to 0.25 and 0.13 t per day in 2007, respectively (Figure 28c).

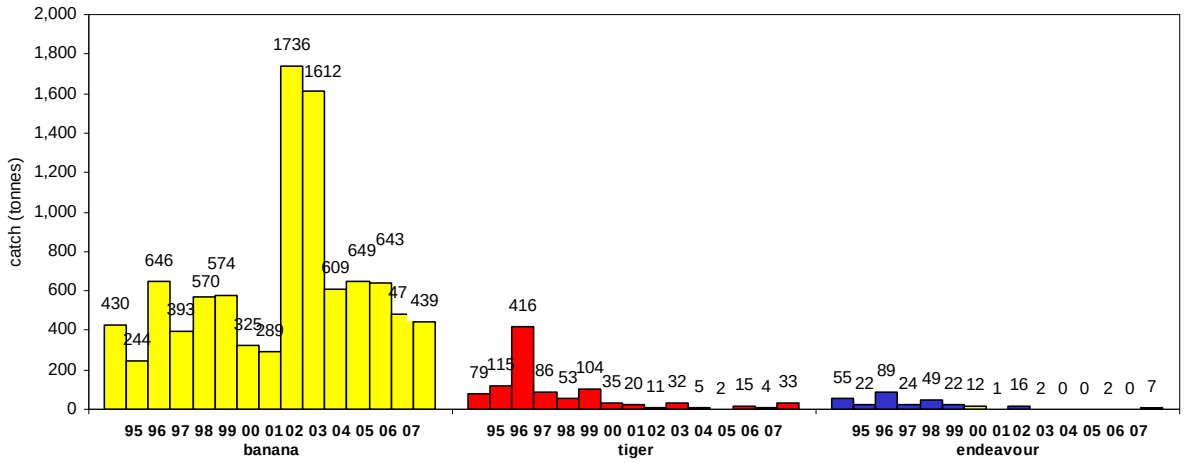

Figure 26: Catch by species in the Bold area between 1995 and 2007.

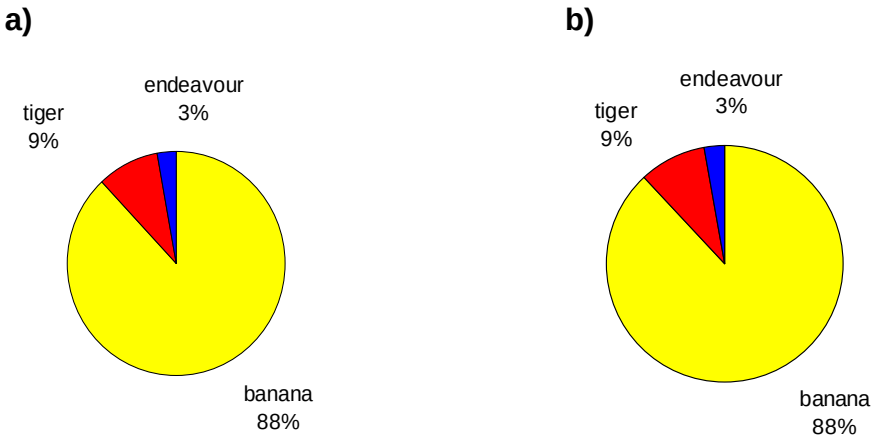

Figure 27: Percentage catch of prawn species in the Bold area during 2007 (a) and catch of prawn species in the Bold area from 1993 to 2007 (b).

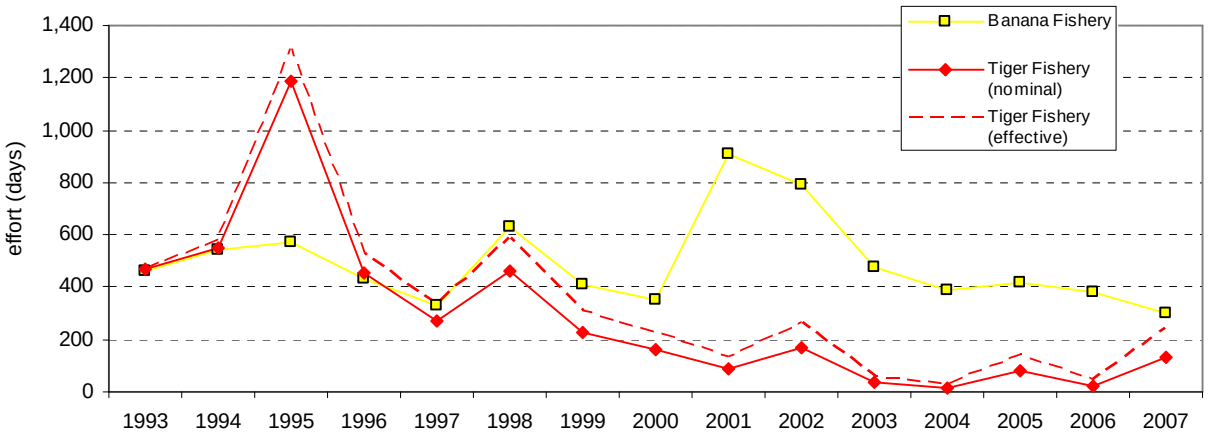

Figure 28a: Effort for the banana and tiger prawn fisheries in the Bold area between 1993 and 2007.

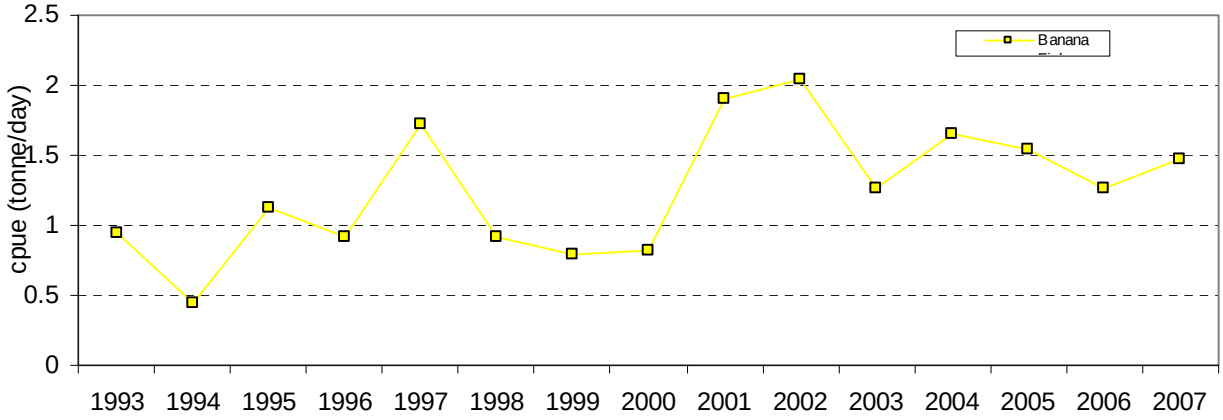

Figure 28b: Catch rate for the banana fishery in the Bold area between 1993 and 2007.

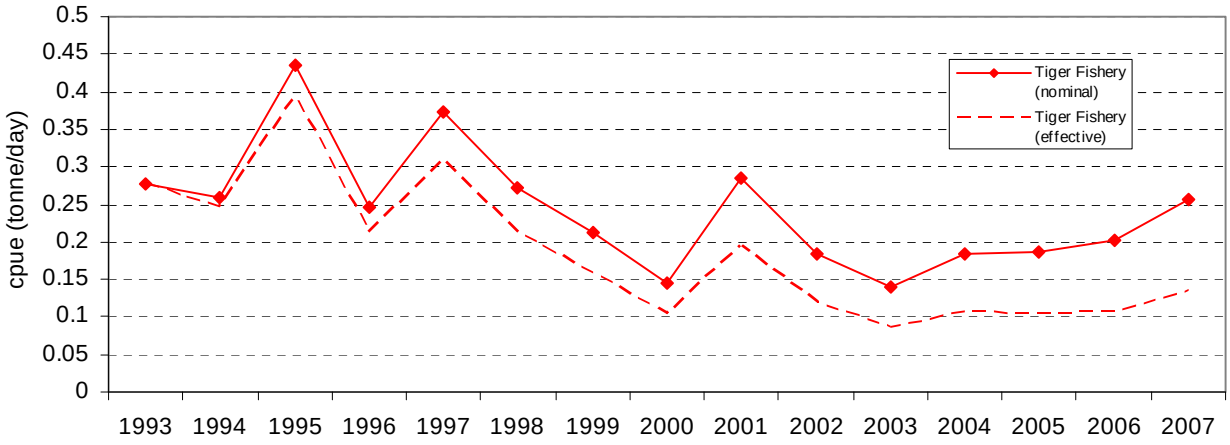

Figure 28c: Catch rate for the tiger prawn fishery in the Bold area between 1993 and 2007.

Sweers

Banana prawn catches in the Sweers area increased from 70 t in 2006 to 137 t in 2007. Catches of tiger and endeavour prawns did not show any change (Figure 29). Banana prawns comprised 100% of the catch for 2006 (Figure 30).

Effort in the banana fishery increased from 48 days in 2006 to 83 days in 2007 (Figure 31a). CPUE of banana prawns increased from 1.45 t per day in 2006 to 1.64 t per day in 2007 (Figure 31b). Effort in the tiger prawn fishery decreased from 1 day in 2006 to 0 in 2007 (Figure 31a). Nominal and effective CPUE for 2007 was zero (Figure 31c).

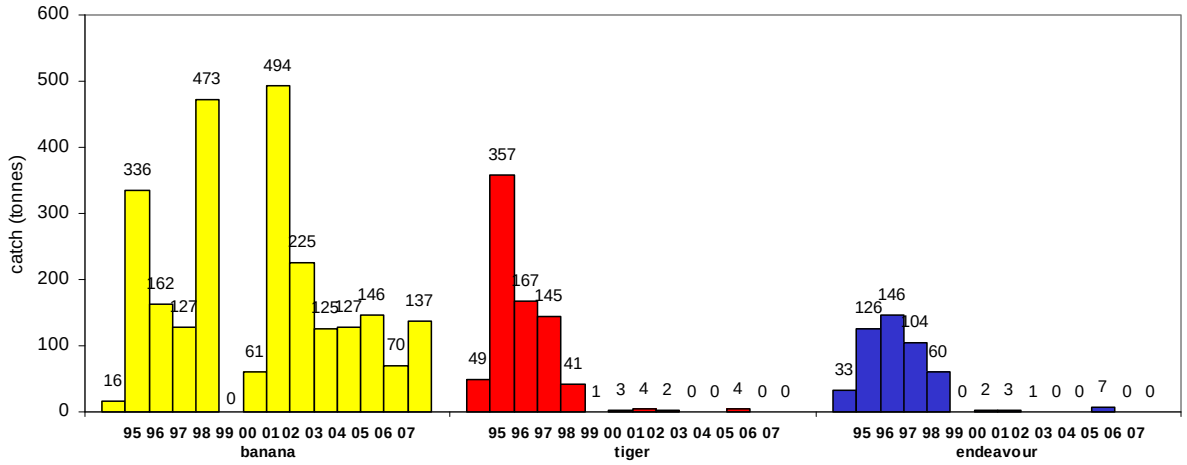

Figure 29: Catch by species in the Sweers area between 1995 and 2007.

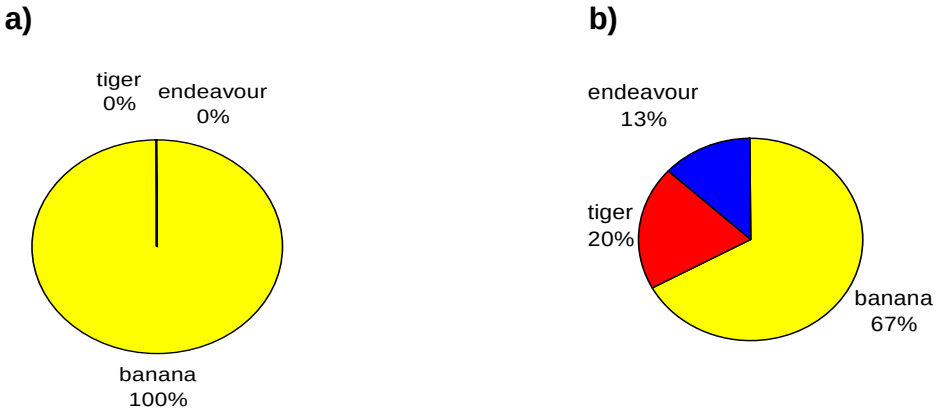

Figure 30: Percentage catch of prawn species in the Sweers area during 2007 (a) Percentage catch of prawn species in the Sweers area from 1993 to 2007 (b).

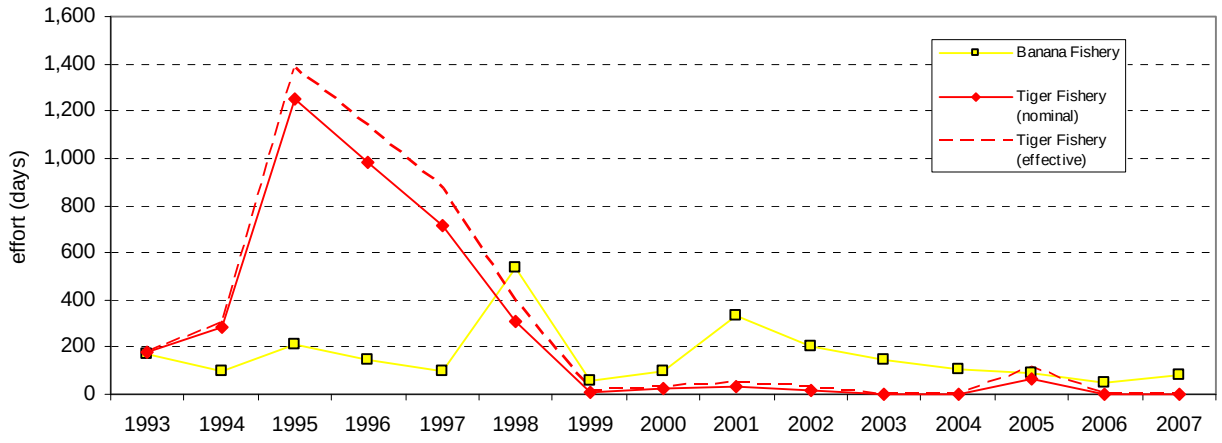

Figure 31a: Effort for the banana and tiger prawn fisheries in the Sweers area between 1993 and 2007.

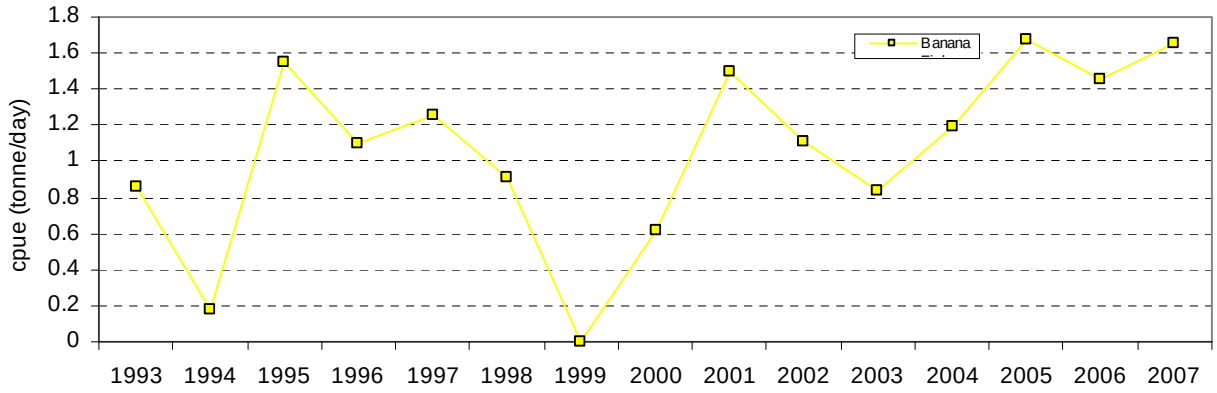

Figure 31b: Catch rate for the banana fishery in the Sweers area between 1993 and 2007.

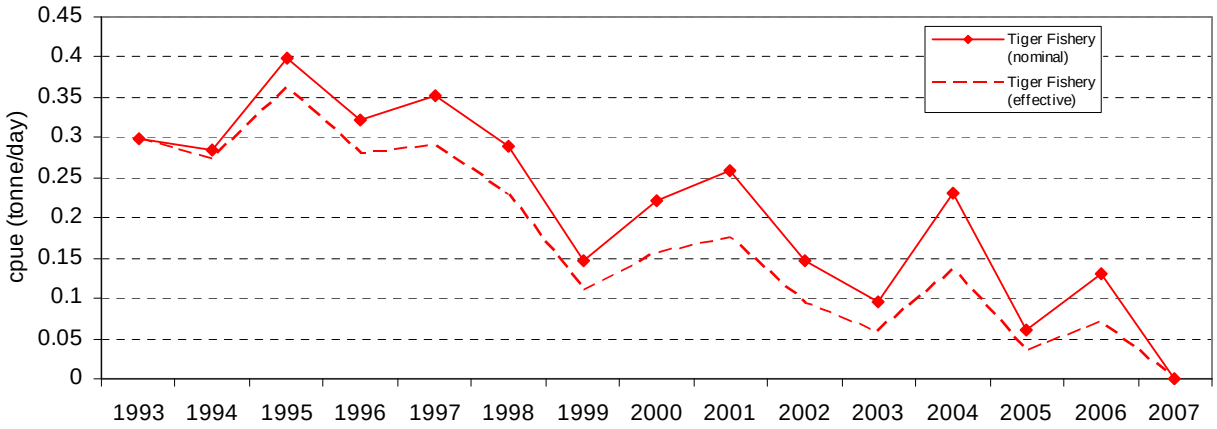

Figure 31c: Catch rate for the tiger prawn fishery in the Sweers area between 1993 and 2007.

Mornington

Banana prawn catches in the Mornington area decreased from 187 t in 2006 to 145 t in 2007. Catches of tiger prawns decreased from 206 t in 2006 to 57 t in 2007, while the endeavour prawn catch decreased from 44 t in 2006 to 24 t in 2007 (Figure 32). Banana prawns dominated the catch in this area, contributing to 64% of the catch in 2007 (Figure 33).

Effort in the banana prawn fishery decreased from 204 days in 2006 to 179 days in 2007 (Figure 34a). CPUE of banana prawns decreased from 0.91 t per day in 2006 to 0.81 t per day in 2007 (Figure34b). Effort in the tiger prawn fishery decreased from 780 days in 2006 to 333 days in 2007 (Figure 34a). Nominal and effective CPUE increased from 0.26 t per day and 0.14 t per day in 2006 to 0.17 t per day and 0.09 t per day in 2007, respectively (Figure 34c).

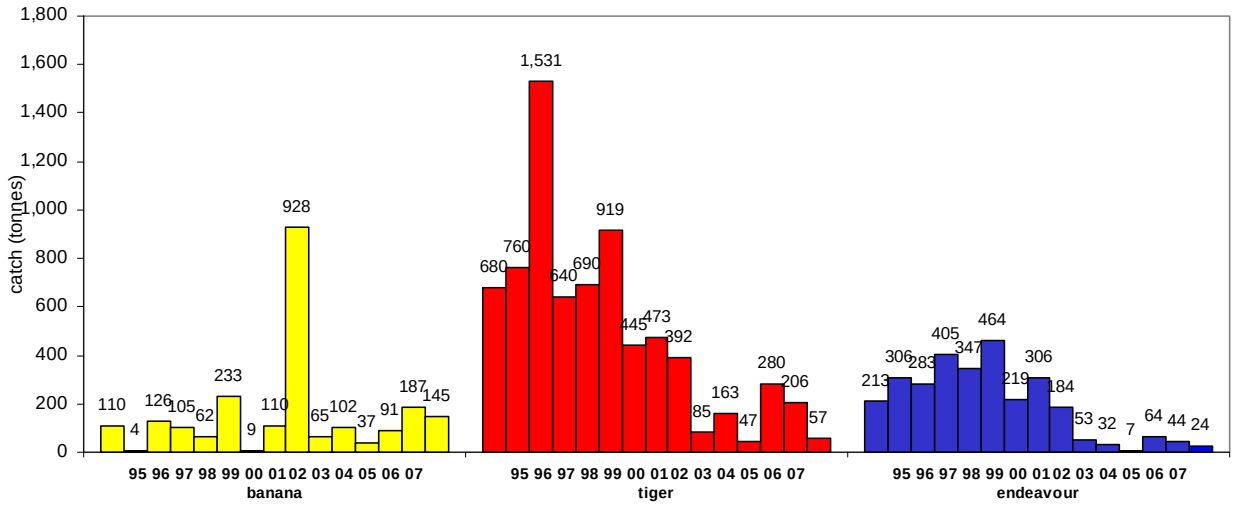

Figure 32: Catch by species in the Mornington area between 1993 and 2007.

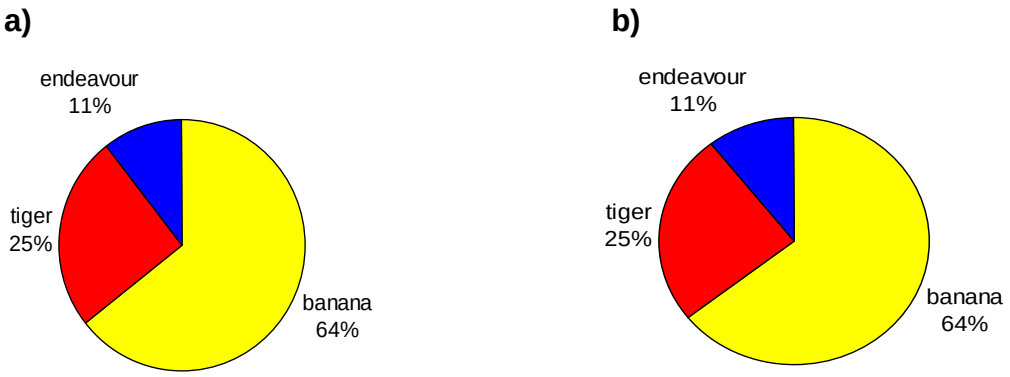

Figure 33: Percentage catch of prawn species in the Mornington area during 2007 (a) and percentage catch of prawn species in the Mornington area from 1993 to 2007 (b).

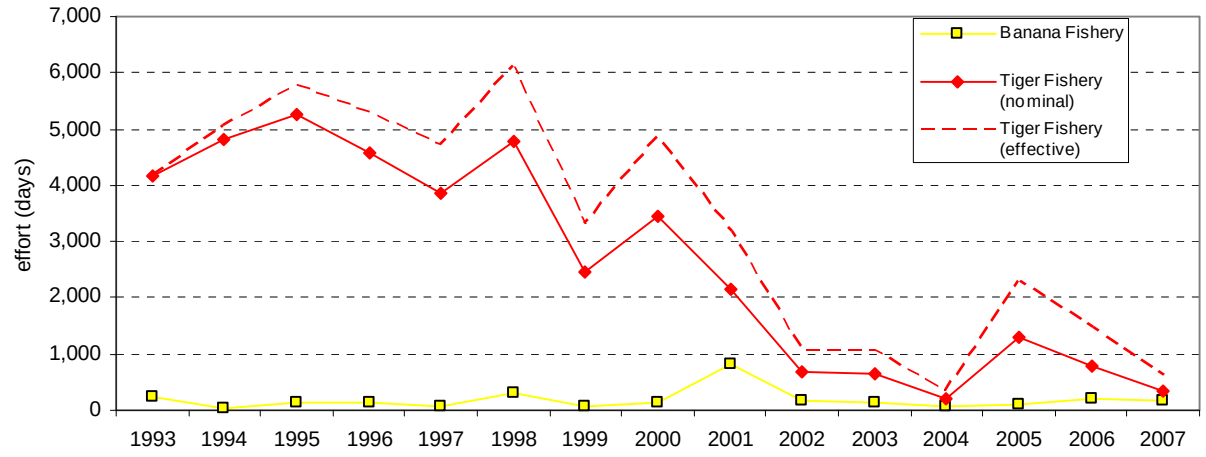

Figure 34a: Effort for the banana and tiger prawn fisheries in the Mornington area between 1993 and 2007.

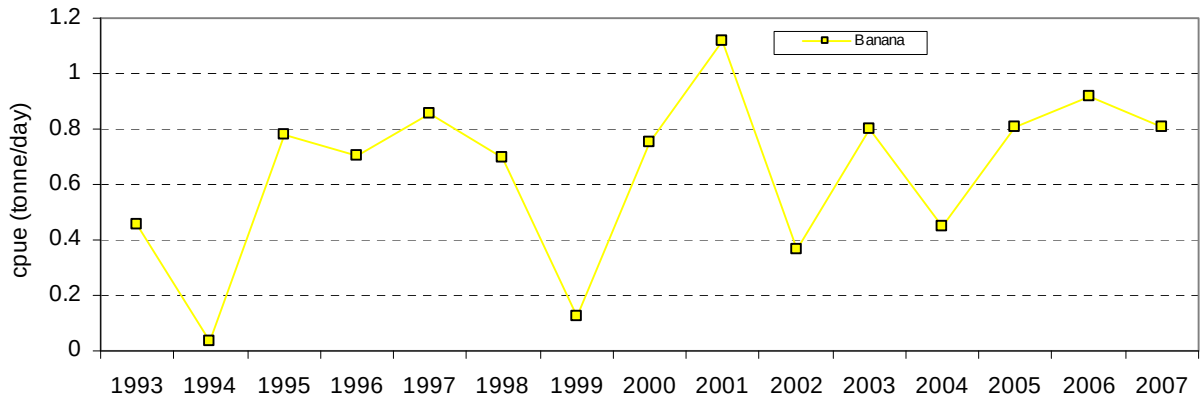

Figure 34b: Catch rate for the banana fishery in the Mornington area between 1993 and 2007.

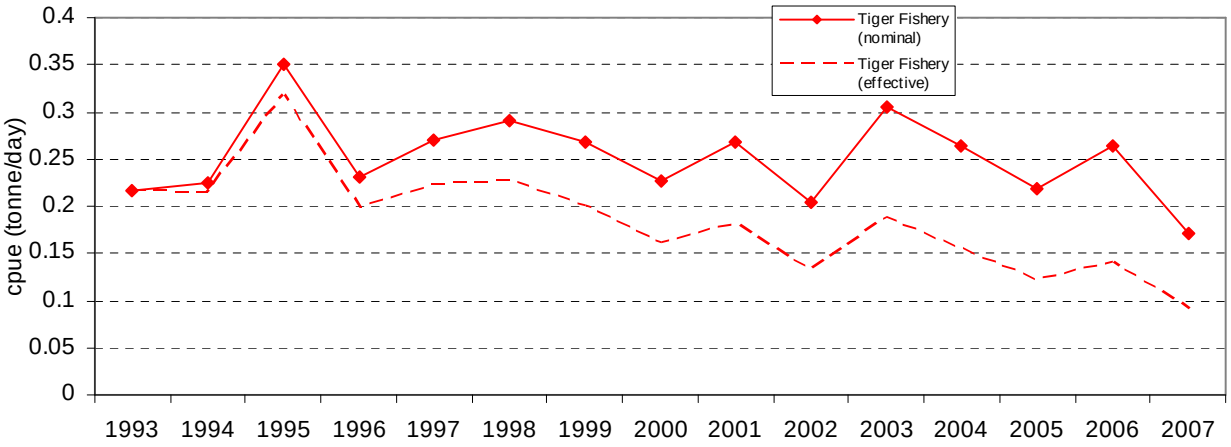

Figure 34c: Catch rate for the tiger prawn fishery in the Mornington area between 1993 and 2007.

Limmen Bight

Banana prawn catches in the Limmen Bight area decreased from 429 t in 2006 to 30 t in 2007. Catches of tiger prawns decreased from 719 t in 2006 to 284 t in 2007, while endeavour prawn catches decreased from 121 t in 2006 to 62 t in 2007 (Figure 35). Tiger prawns dominated the catch for 2007 in this area, contributing to 76% of the catch (Figure 36).

Effort in the banana prawn fishery decreased from 303 days in 2006 to 101 days in 2007 (Figure 37a). CPUE of banana prawn decreased significantly from 1.42 t per day in 2006 to 0.3 t per day in 2007 (Figure 37b). Effort in the tiger prawn fishery decreased from 2516 days in 2006 to 1470 in 2007 (Figure 37a). Nominal and effective CPUE decreased from 0.28 t per day and 0.15 t per day in 2006 to 0.19 t per day and 0.10 t per day in 2007, respectively (Figure 37c).

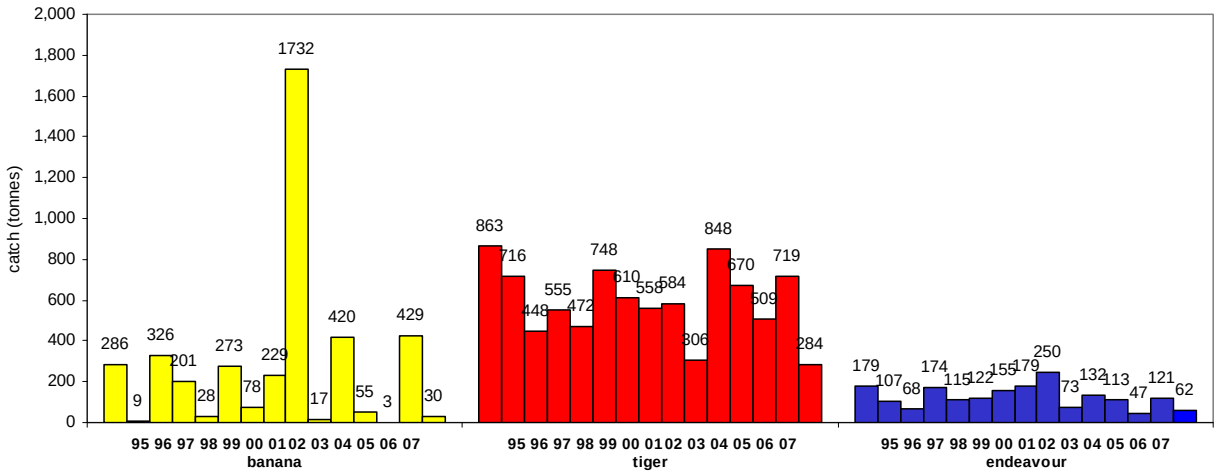

Figure 35: Catch by species in the Limmen Bight area between 1995 and 2007.

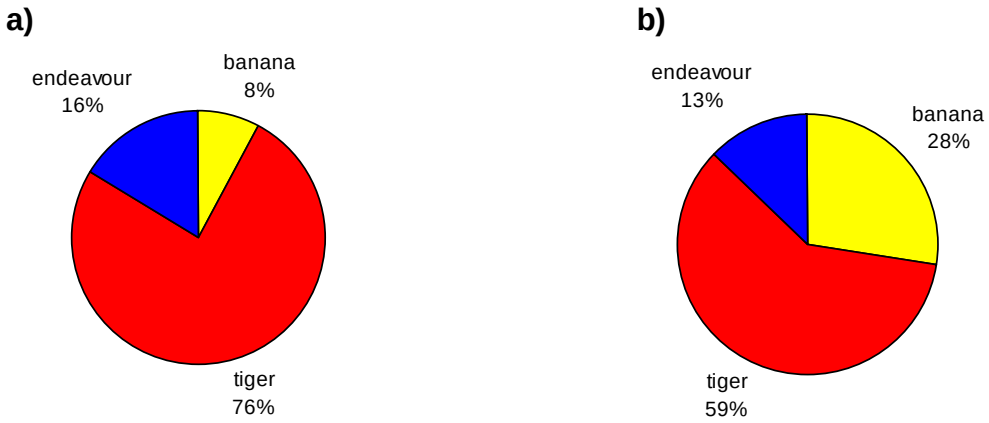

Figure 36: Percentage catch of prawn species in the Limmen Bight area during 2007 (a) and percentage catch of prawn species in the Limmen Bight area from 1993 to 2007 (b).

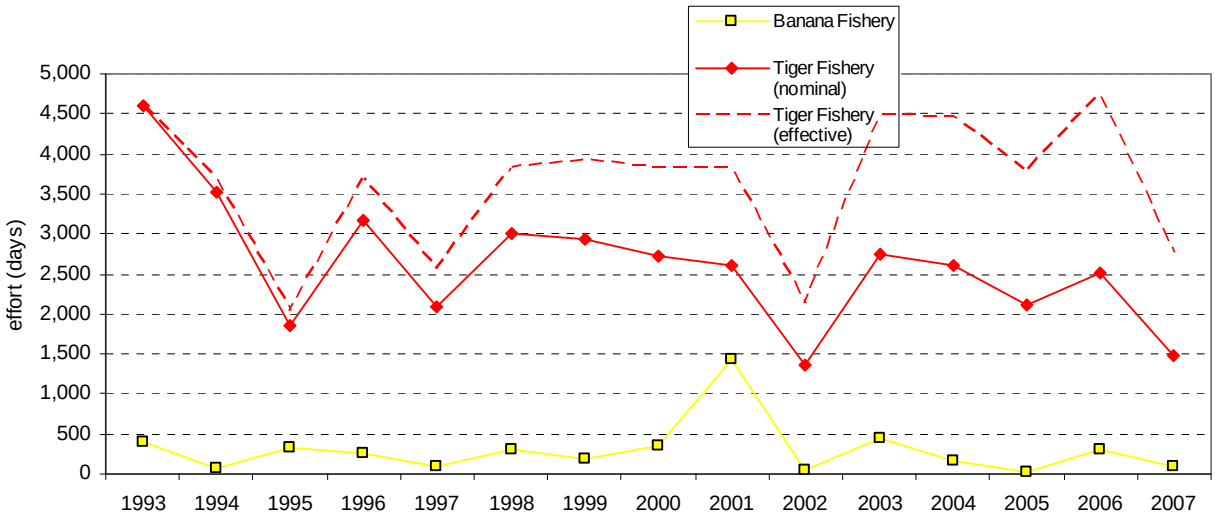

Figure 37a: Effort for the banana and tiger prawn fisheries in the Limmen Bight area between 1993 and 2007.

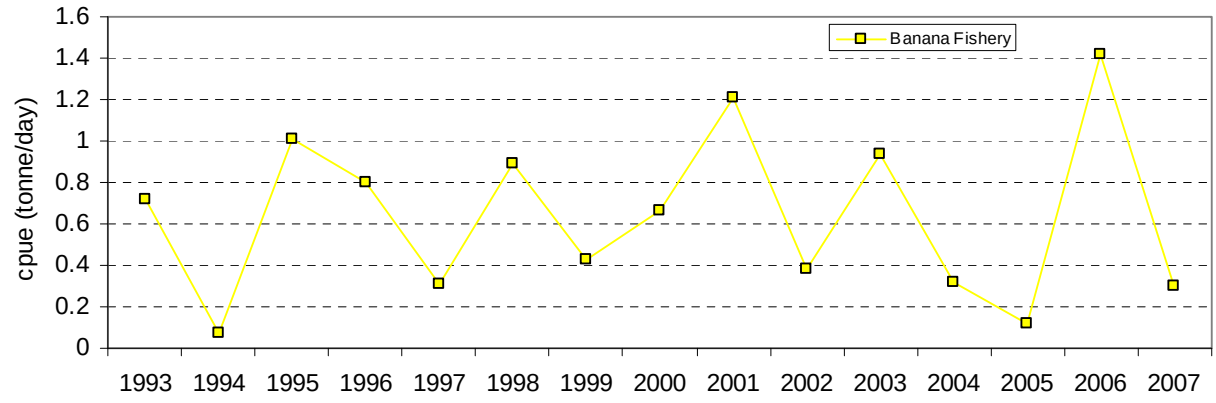

Figure 37b: Catch rate for the banana fishery in the Limmen Bight area between 1993 and 2007.

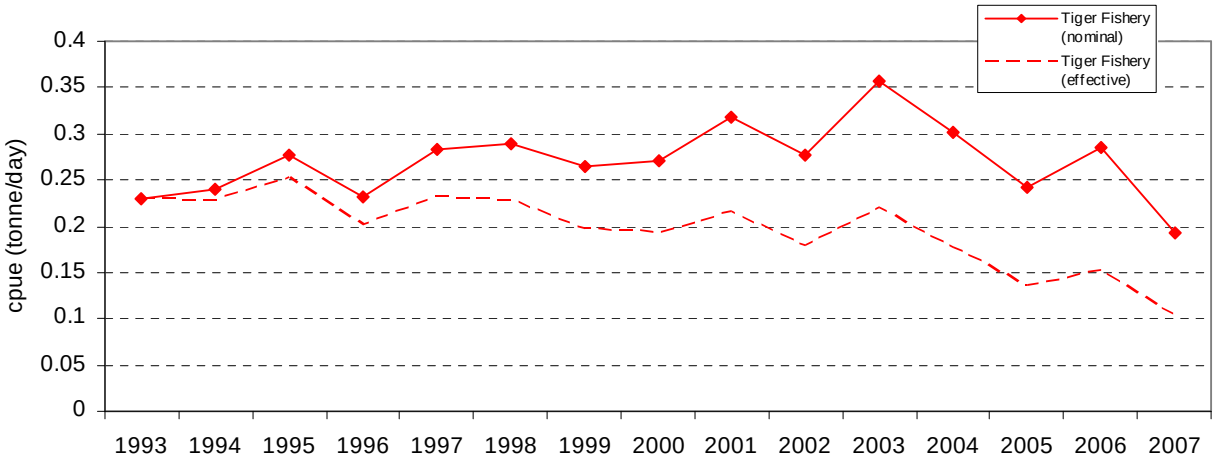

Figure 37c: Catch rate for the tiger prawn fishery in the Limmen Bight area between 1993 and 2007.

Groote

Banana prawn catches in the Groote area decreased from 97 t in 2006 to 49 t in 2007. Catches of tiger prawns decreased from 594 t in 2006 to 307 t in 2007, while endeavour prawn catches decreased from 137 t in 2006 to 77 t in 2007 (Figure 38). Tiger prawns dominated the catch in this area, contributing to 71% of the catch in 2007 (Figure 39).

Effort in the banana prawn fishery increased from 171 days in 2006 to 190 in 2007 (Figure 40a). CPUE of banana prawns decreased from 0.57 t per day in 2006 to 0.26 t per day in 2007 (Figure 40b). Effort in the tiger prawn fishery decreased from 2516 days in 2006 to 1958 in 2007 (Figure 40a). Nominal and effective CPUE increased from 0.24 t per day and 0.13 t per day in 2006 to 0.15 t per day and 0.08 t per day in 2007, respectively (Figure 40c).

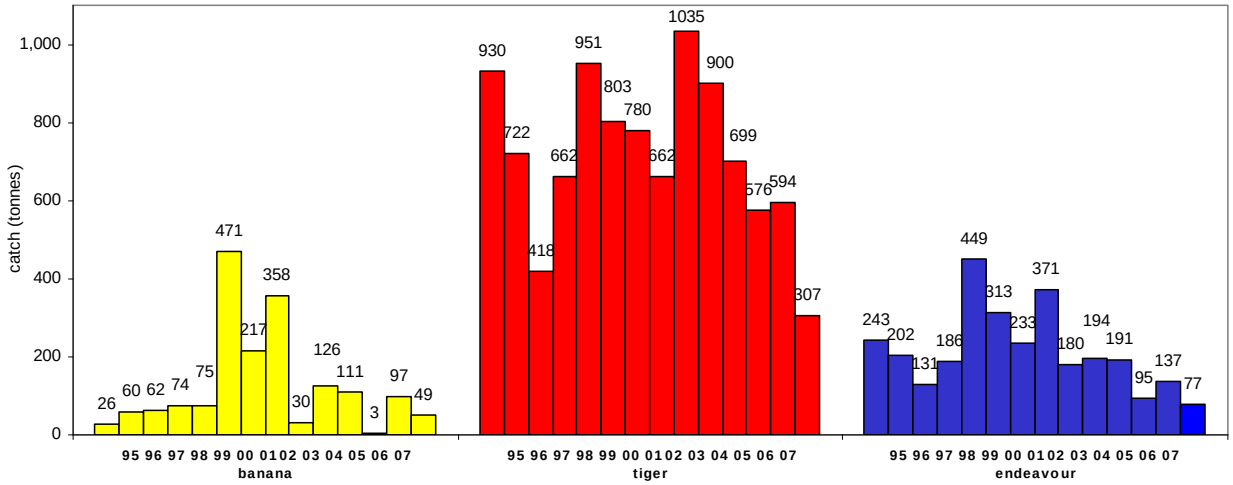

Figure 38: Catch by species in the Groote area between 1995 and 2007.

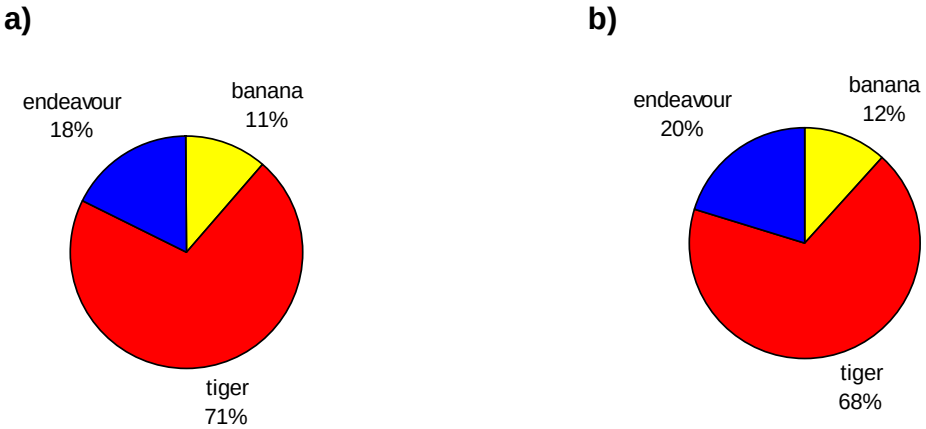

Figure 39: Percentage catch of prawn species in the Limmen Bight area during 2007 (a) and percentage catch of prawn species in the Groote area from 1993 to 2007 (b).

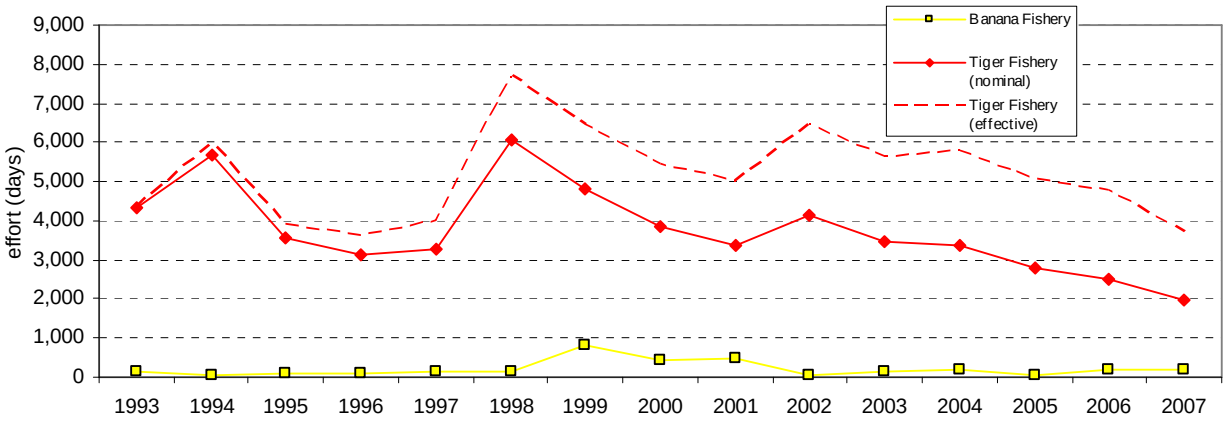

Figure 40a: Effort for the banana and tiger prawn fisheries in the Groote area between 1993 and 2007.

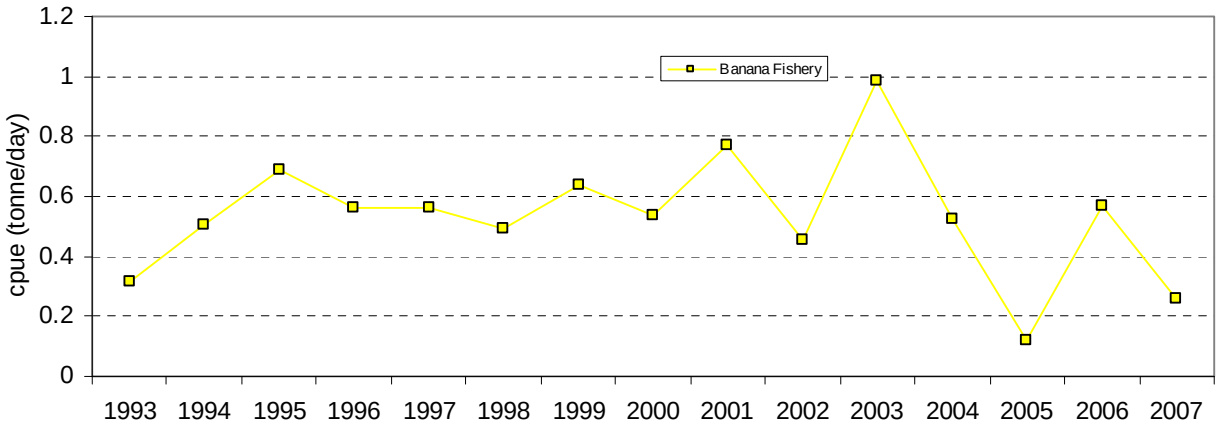

Figure 40b: Catch rate for the banana fishery in the Groote area between 1993 and 2007.

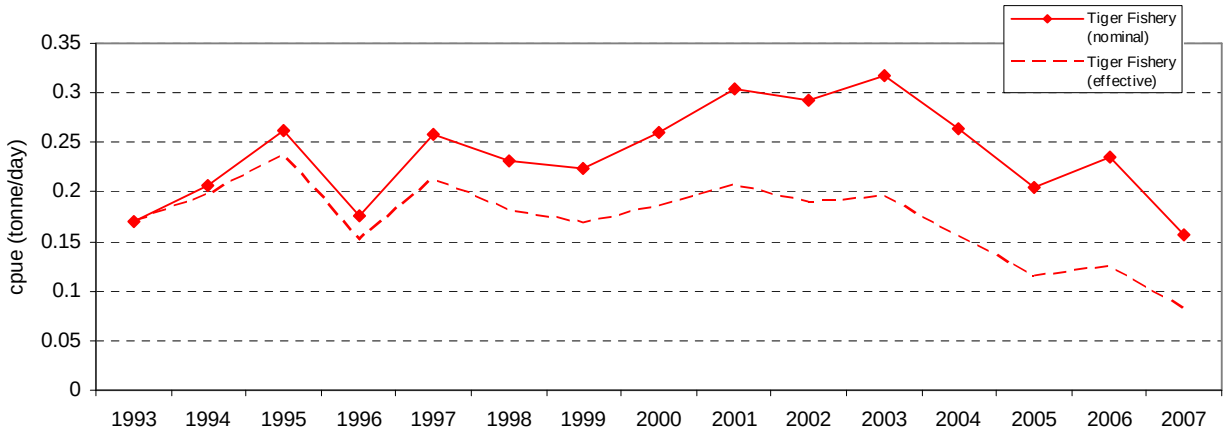

Figure 40c: Catch rate for the tiger prawn fishery in the Groote area between 1993 and 2007.

Gove

Banana prawn catches in the Gove area decreased from 143 t in 2006 to 61 t in 2007. Catches of tiger prawns decreased from 262 t in 2006 to 162 t in 2007, while endeavour prawn catches decreased from 54 t in 2006 to 19 t in 2007 (Figure 41). Tiger prawns dominated the catch, in this area, contributing to 67% of the catch in 2007 (Figure 42).

Effort in the banana prawn fishery decreased from 243 days in 2006 to 156 in 2007 (Figure 43a). CPUE of banana prawn decreased from 0.59 t per day in 2006 to 0.4 t per day in 2007 (Figure 43b). Effort in the tiger prawn fishery decreased from 1099 days in 2006 to 816 in 2007 (Figure 43a). Nominal and effective CPUE decreased from 0.24 t per day and 0.13 t per day in 2006 to 0.2 t per day and 0.1 t per day in 2007, respectively (Figure 43c).

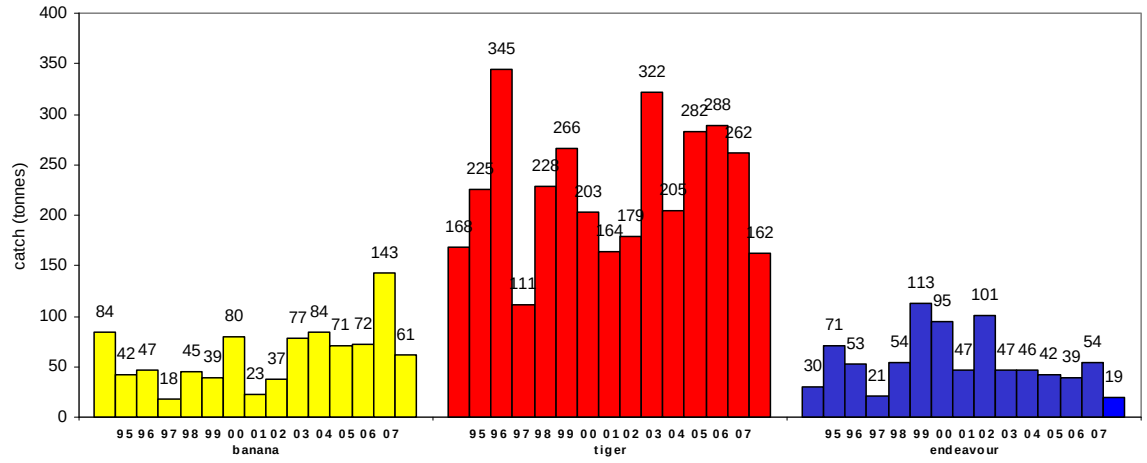

Figure 41: Catch by species in the Gove area between 1995 and 2007.

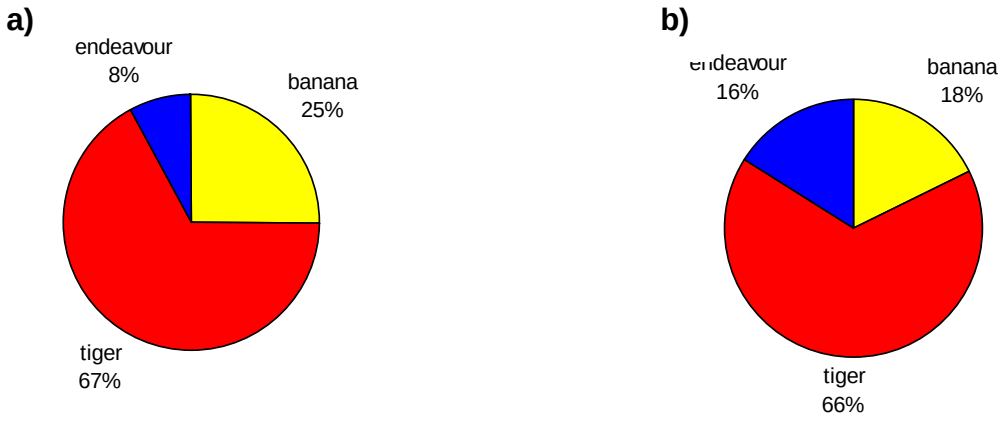

Figure 42: Percentage catch of prawn species in the Gove area during 2007 (a) and percentage catch of prawn species in the Gove area from 1993 to 2007 (b).

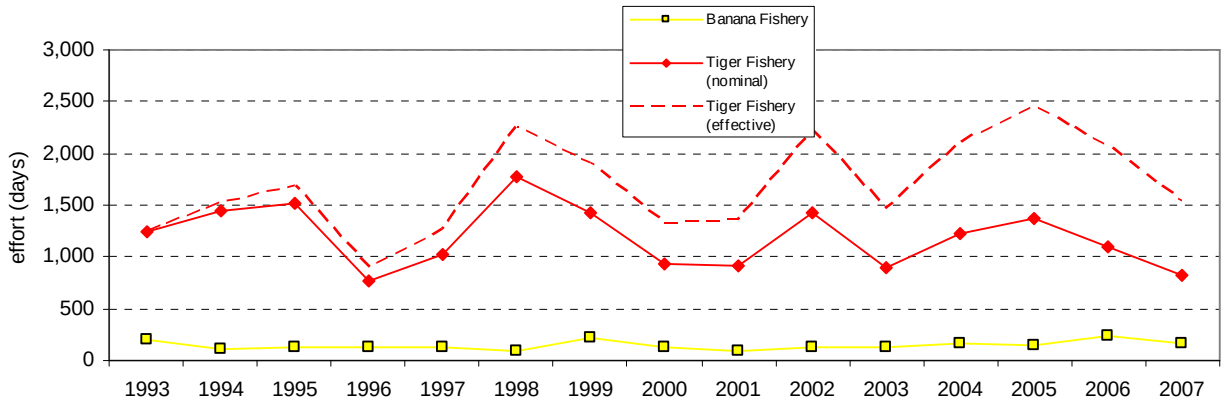

Figure 43a: Effort for the banana and tiger prawn fisheries in the Gove area between 1993 and 2007.

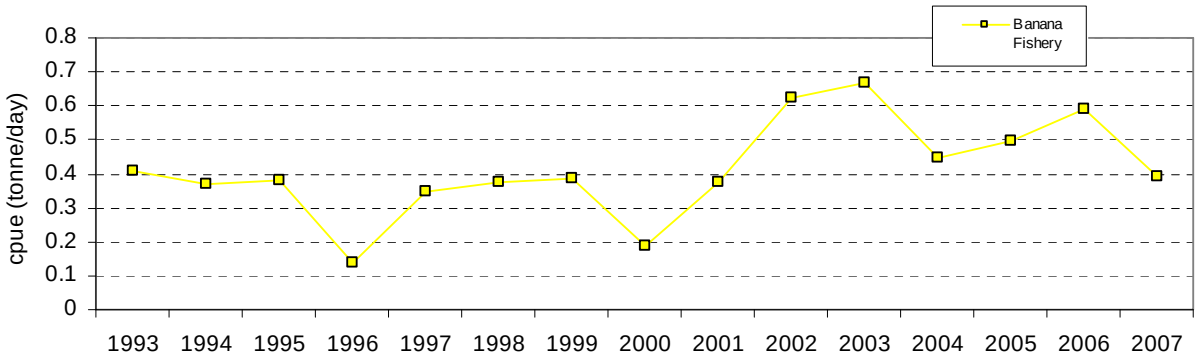

Figure 43b: Catch rate for the banana fishery in the Gove area between 1993 and 2007.

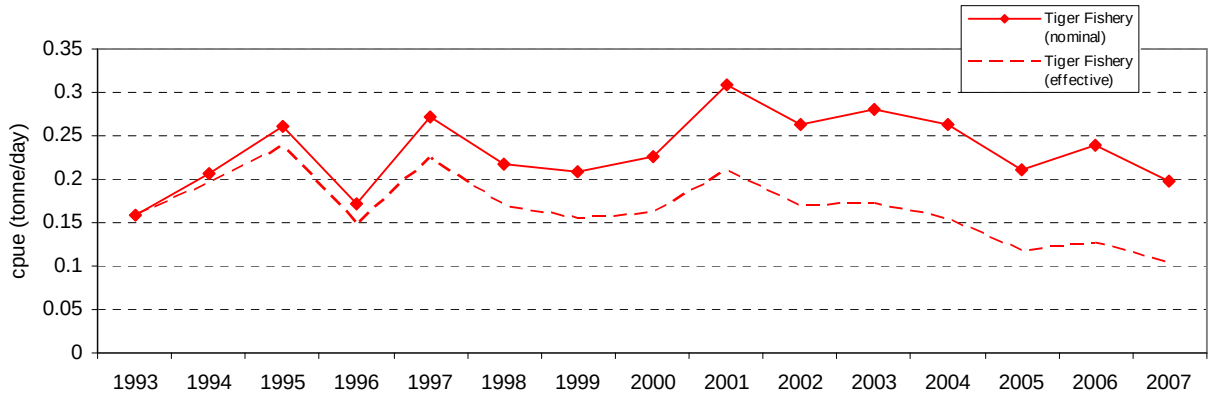

Figure 43c: Catch rate for the tiger prawn fishery in the Gove area between 1993 and 2007.

Arnhem

Banana prawn catches in the Arnhem area decreased from 213 t in 2006 to 36 t in 2007. Catches of tiger prawn increased from 7 t in 2006 to 11 t in 2007, while endeavour prawn catches remained the same for 2007 (Figure 44). Banana prawns dominated the catch in this area, contributing to 75% of the catch in 2007 (Figure 45).

Effort in the banana prawn fishery decreased from 277 days in 2006 to 118 in 2007 (Figure 46a). CPUE of banana prawn decreased from 0.94 t per day in 2006 to 0.3 t per day in 2007 (Figure 46b). Effort in the tiger prawn fishery increased from 44 days in 2006 to 66 in 2007 (Figure 46a). Nominal and effective CPUE increased slightly from 0.16 t per day and 0.08 t per day in 2006 to 0.17 t per day and 0.09 t per day in 2007, respectively (Figure 46c).

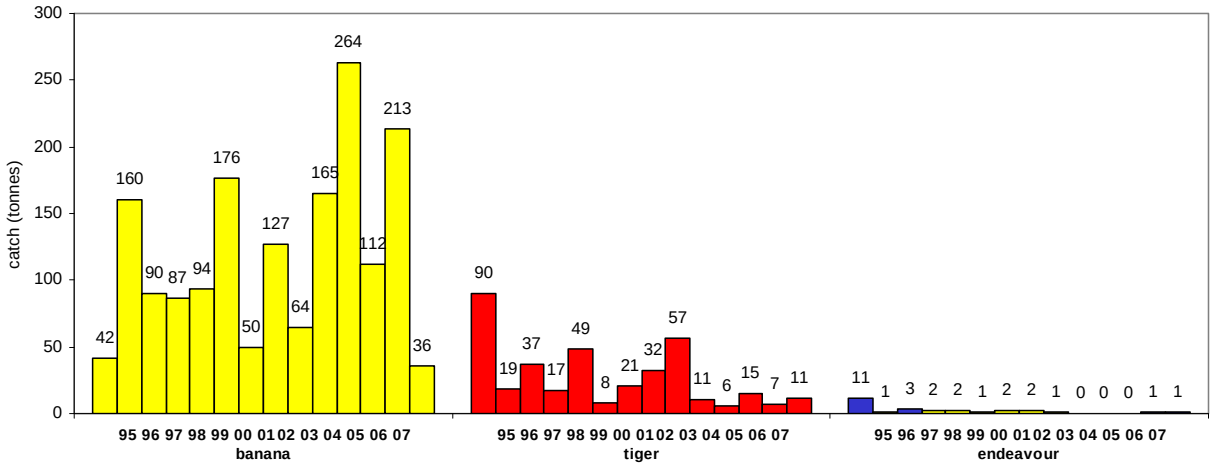

Figure 44: Catch by species in the Arnhem area between 1995 and 2007.

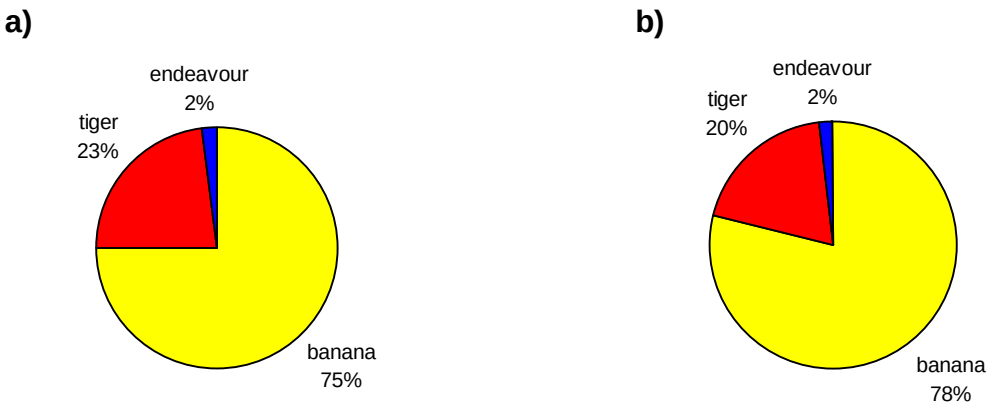

Figure 45: Percentage catch of prawn species in the Arnhem area during 2007 (a) and percentage catch of prawn species in the Arnhem area from 1993 to 2007 (b).

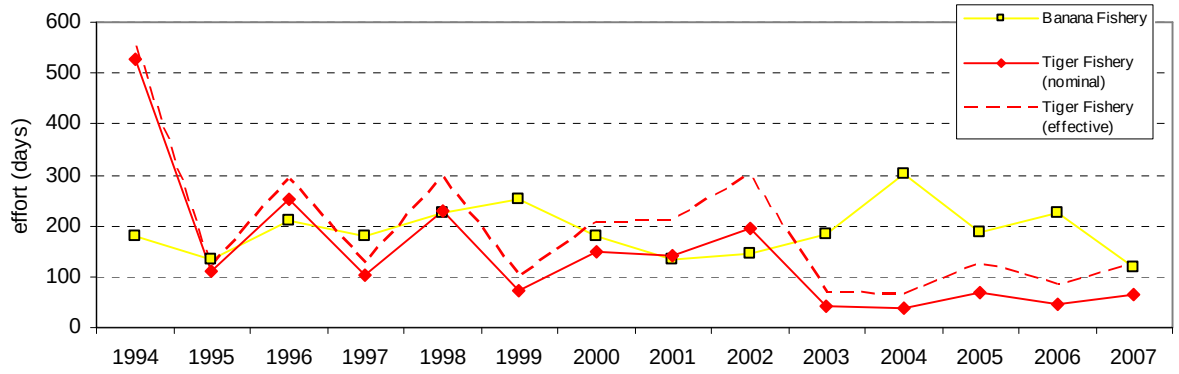

Figure 46a: Effort for the banana and tiger prawn fisheries in the Arnhem area between 1993 and 2007.

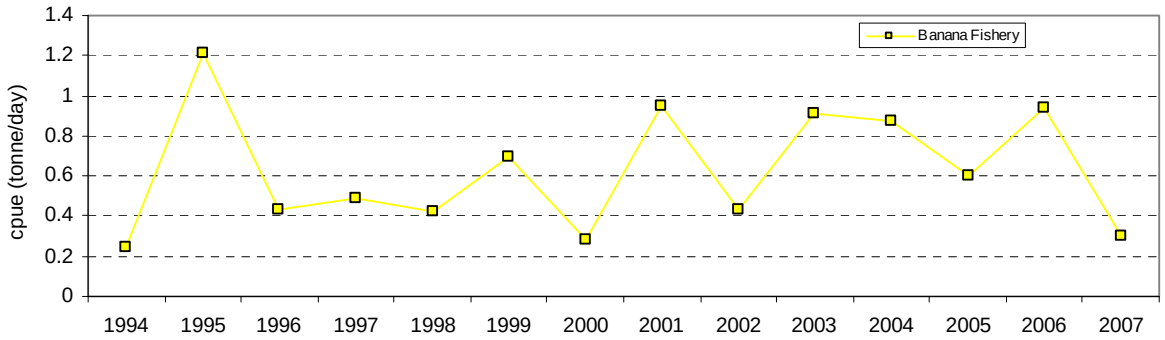

Figure 46b: Catch rate for the banana fishery in the Arnhem area between 1993 and 2007.

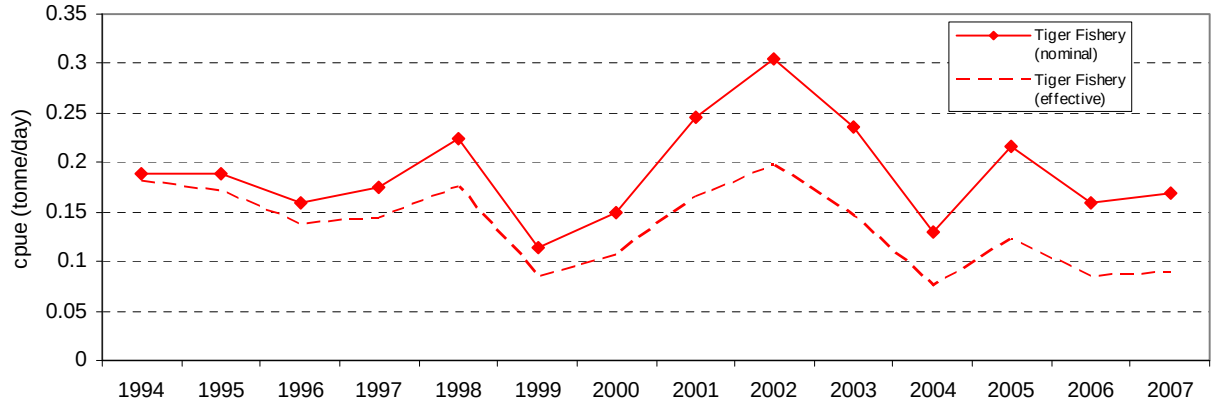

Figure 46c: Catch rate for the tiger prawn fishery in the Arnhem area between 1993 and 2007.

Port Essington

Banana prawn catches in the Port Essington area decreased from 193 t in 2006 to 116 t in 2007. Catches of tiger prawns increased from 2 t in 2006 to 3 t in 2007, while endeavour prawn catch decreased from 2 t in 2005 to 0 in 2007 (Figure 47). Banana prawns comprised 97% of the catch in 2007 (Figure 48).

Effort in the banana prawn fishery decreased from 197 days in 2006 to 141 in 2007 (Figure 49a). CPUE of banana prawn decreased from 0.98 t per day in 2006 to 0.82 t per day in 2007 (Figure 49b). Effort in the tiger prawn fishery increased from 6 days in 2006 to 18 in 2007 (Figure 49a). Nominal and effective CPUE decreased from 0.33 t per day and 0.18 t per day in 2006 to 0.18 t per day and 0.1 t per day in 2007, respectively (Figure 49c).

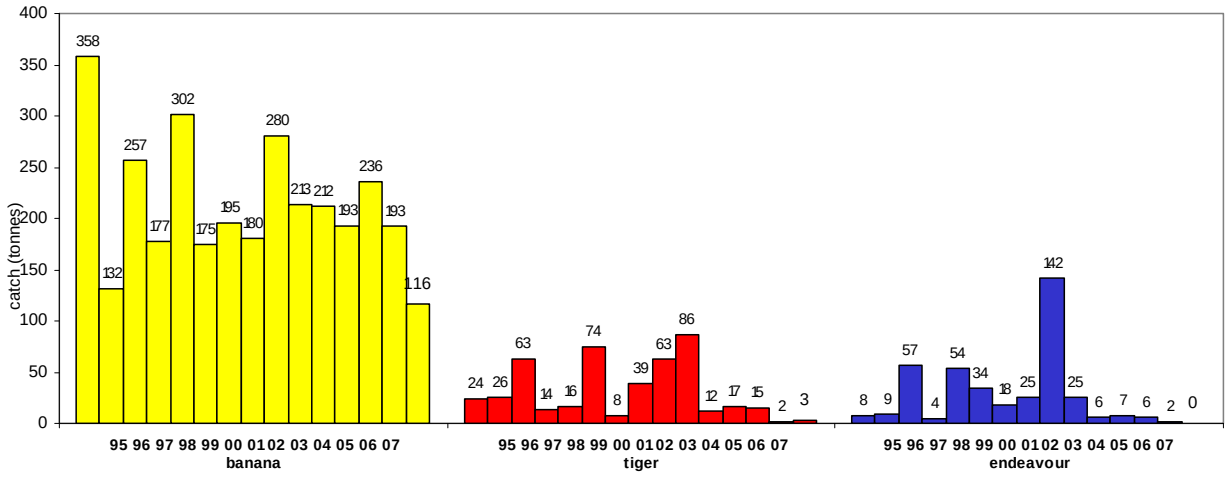

Figure 47: Catch by species in the Port Essington area between 1995 and 2007.

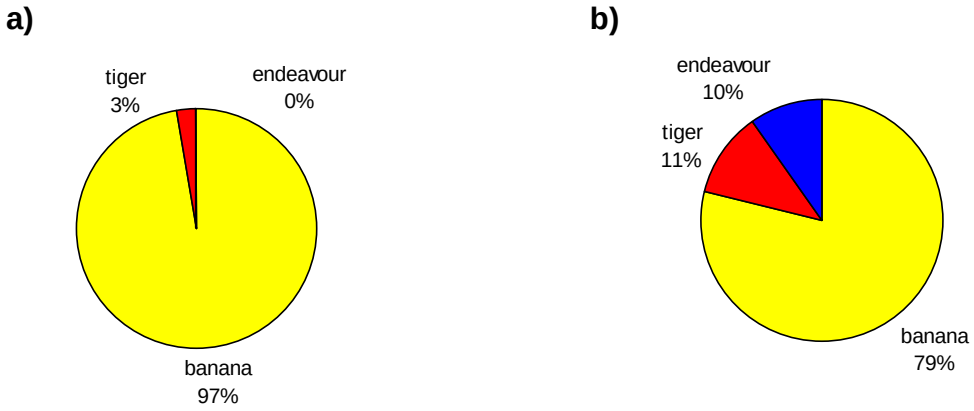

Figure 48: Percentage catch of prawn species in the Port Essington area during 2007 (a) percentage catch of prawn species in the Port Essington area from 1993 to 2007 (b).

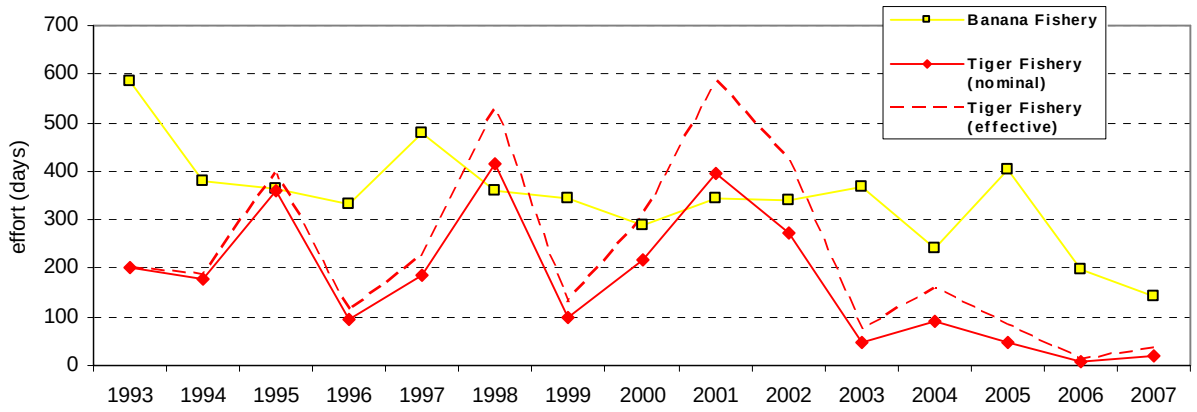

Figure 49a: Effort for the banana and tiger prawn fisheries in the Port Essington area between 1993 and 2007.

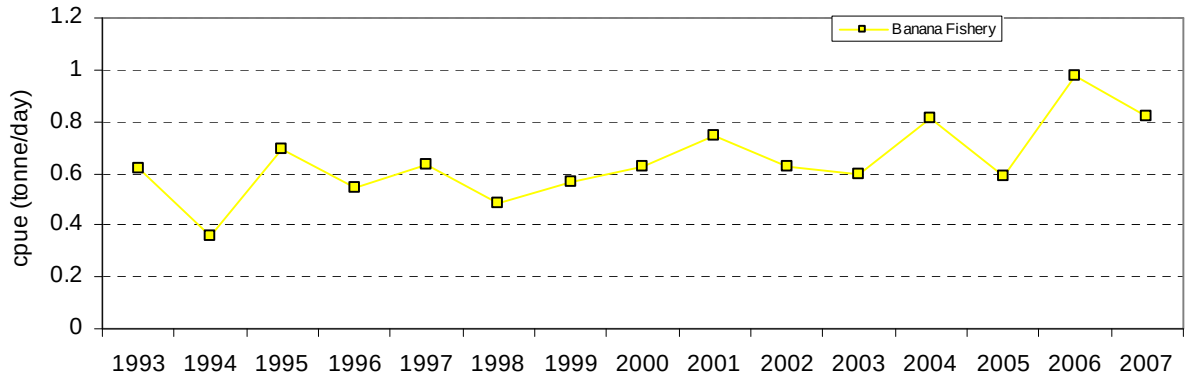

Figure 49b: Catch rate for the banana fishery in the Port Essington area between 1993 and 2007.

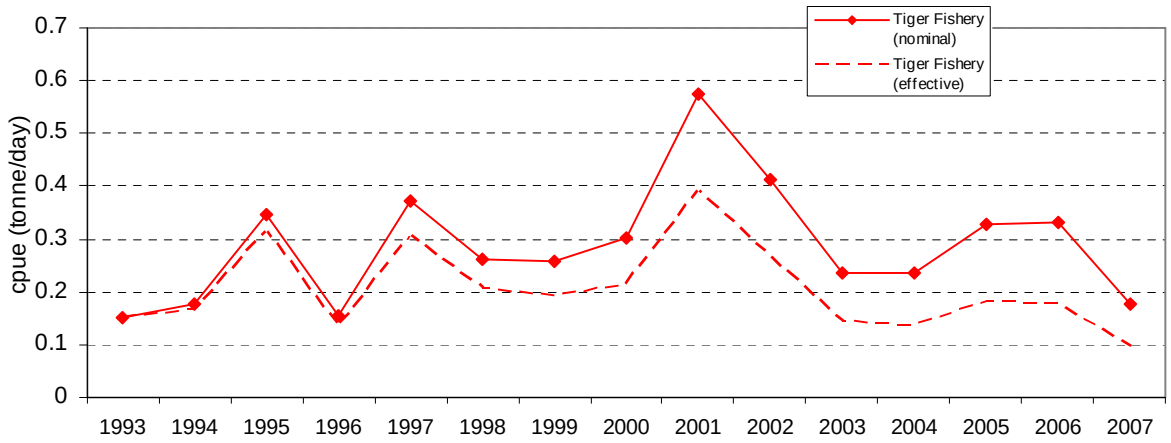

Figure 49c: Catch rate for the tiger prawn fishery in the Port Essington area between 1993 and 2007.

Melville

Banana prawn catches in the Melville area decreased from 160 t in 2006 to 134 t in 2007. No catches of tiger and endeavour prawn were recorded (Figure 50). Banana prawns comprised 99% of the catch 2007 (Figure 51).

Effort in the banana prawn fishery decreased from 230 days in 2006 to 141 in 2007 (Figure 52a). CPUE of banana prawn increased from 0.7 t per day in 2006 to 0.94 t per day in 2007 (Figure 52b). Effort in the tiger prawn fishery increased from 1 day in 2006 to 3 in 2007 (Figure 52a). Nominal and effective CPUE decreased from 0.5 t per day and 0.27 t per day in 2006 to zero in 2007 (Figure 52c).

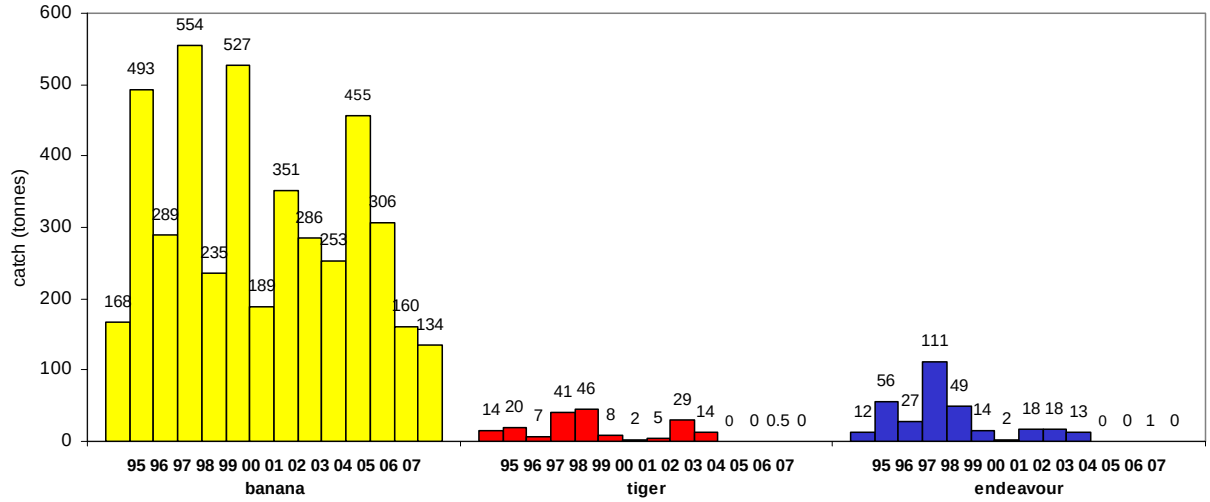

Figure 50: Catch by species in the Melville area between 1995 and 2007.

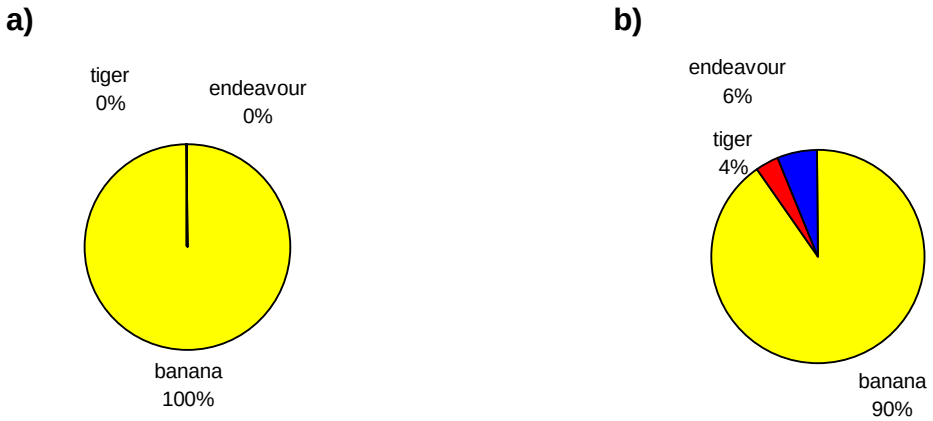

Figure 51: Percentage catch of prawn species in the Melville area during 2007 (a) and percentage catch of prawn species in the Melville area from 1993 to 2007 (b).

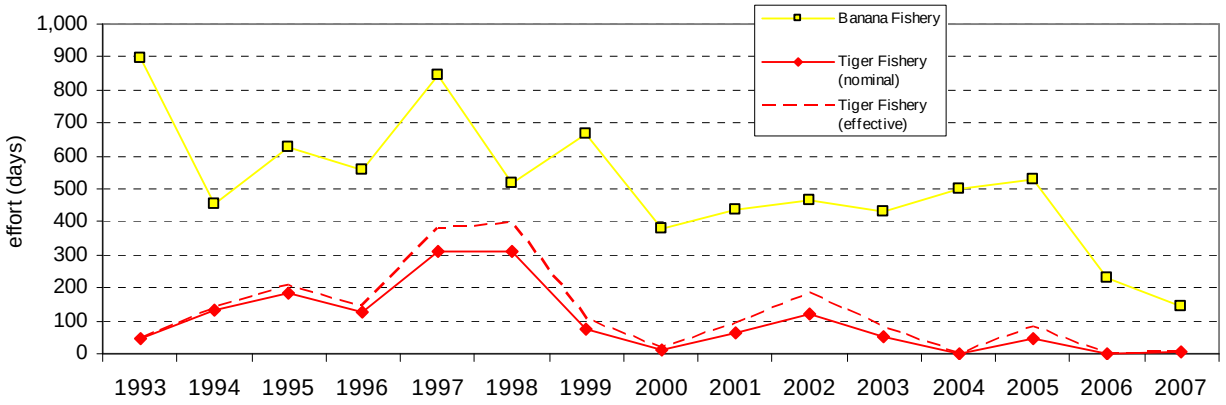

Figure 52a: Effort for the banana and tiger prawn fisheries in the Melville area between 1993 and 2007.

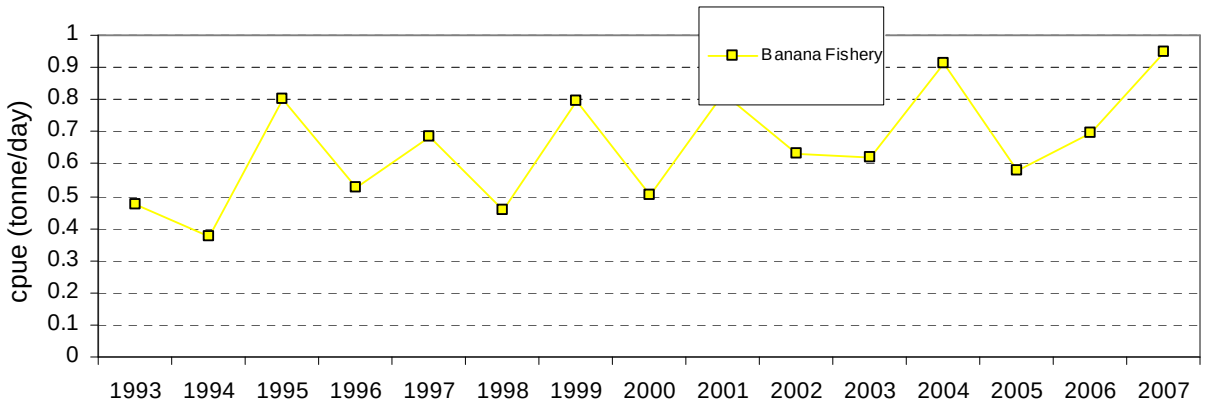

Figure 52b: Catch rate for the banana fishery in the Melville area between 1993 and 2007.

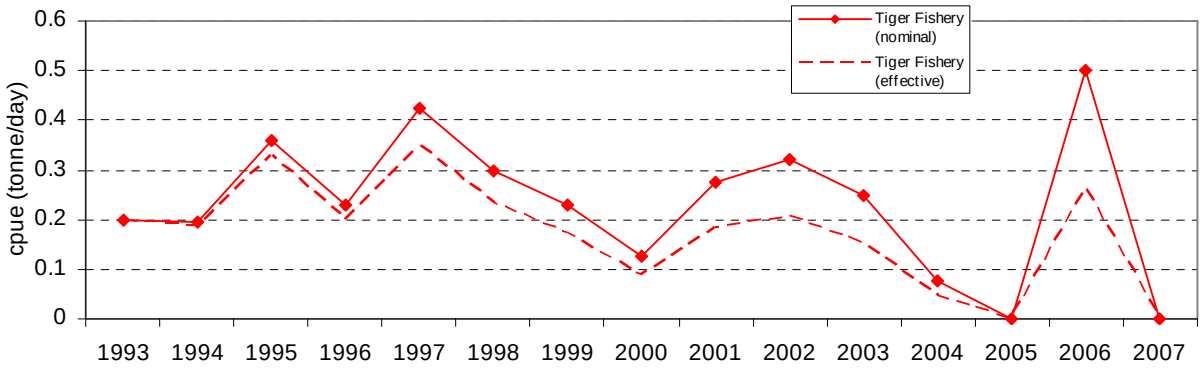

Figure 52c: Catch rate for the tiger prawn fishery in the Melville area between 1993 and 2007.

Fog Bay

Banana prawn catches in the Fog Bay area decreased from 258 t in 2006 to 237 t in 2007. Catches of tiger prawns remained the same while no catches of endeavour prawns were recorded (Figure 53). Banana prawns comprised 100% of the catch for 2007 in this area (Figure 54).

Effort in the banana prawn fishery decreased from 270 days in 2006 to 172 days in 2007 (Figure 55a). CPUE of banana prawn increased from 0.96 t per day in 2006 to 1.37 t per day in 2007 (Figure 55b). Effort in the tiger prawn fishery increased from 2 days in 2006 to 3 in 2007 (Figure 55a). Nominal and effective CPUE decreased from 0.25 t per day and 0.13 t per day in 2006 to 0.18 t per day and 0.1 t per day in 2007, respectively (Figure 55c).

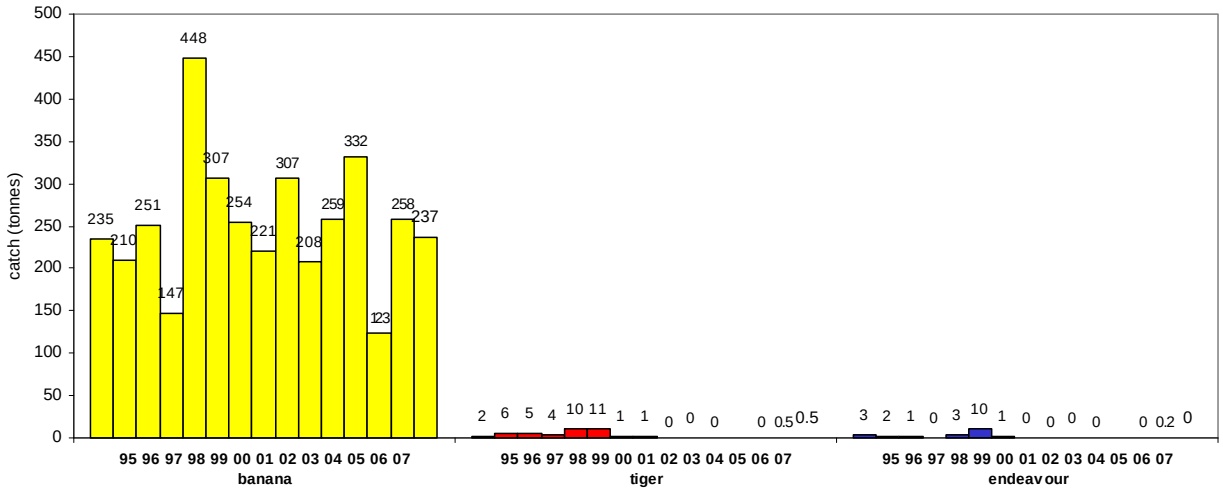

Figure 53: Catch by species in the Fog Bay area between 1995 and 2007.

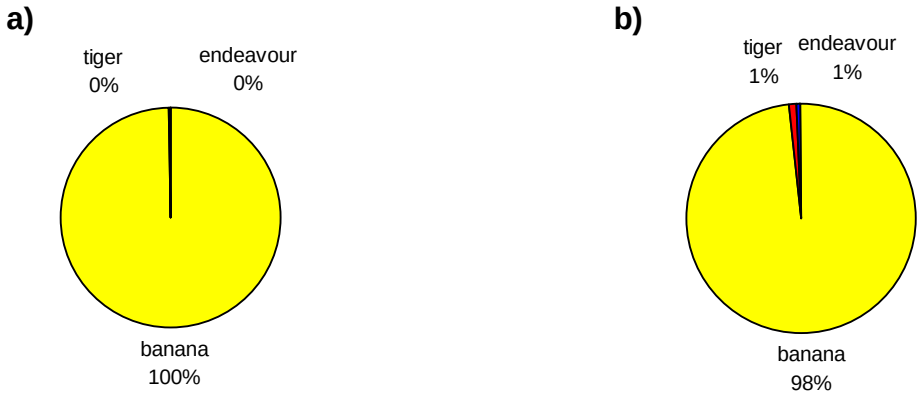

Figure 54: Percentage catch of prawn species in the Fog Bay area during 2007 (a) and percentage catch of prawn species in the Fog Bay area from 1993 to 2007 (b).

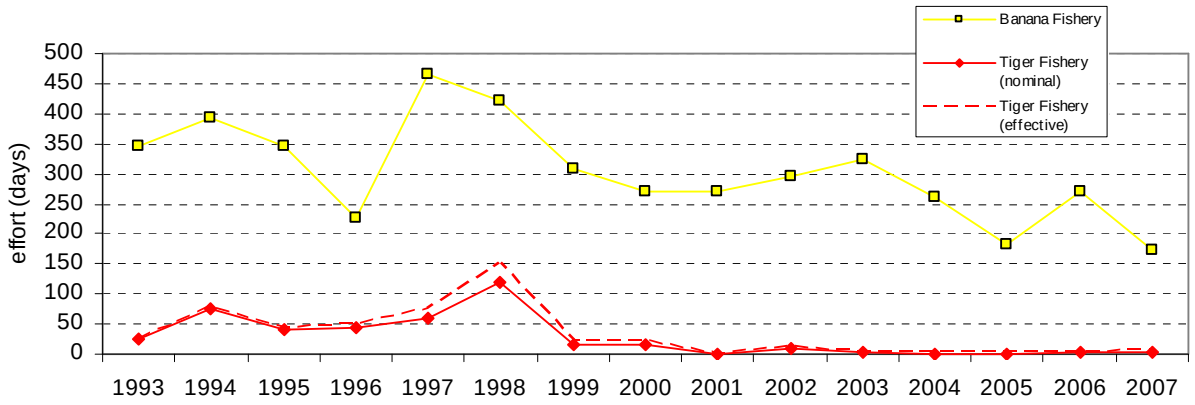

Figure 55a: Effort for the banana and tiger prawn fisheries in the Fog Bay area between 1993 and 2007.

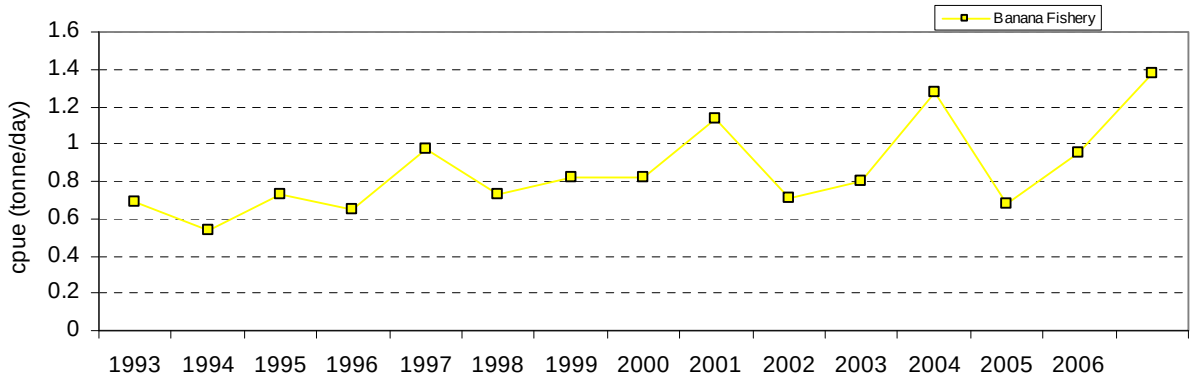

Figure 55b: Catch rate for the banana fishery in the Fog Bay area between 1993 and 2007.

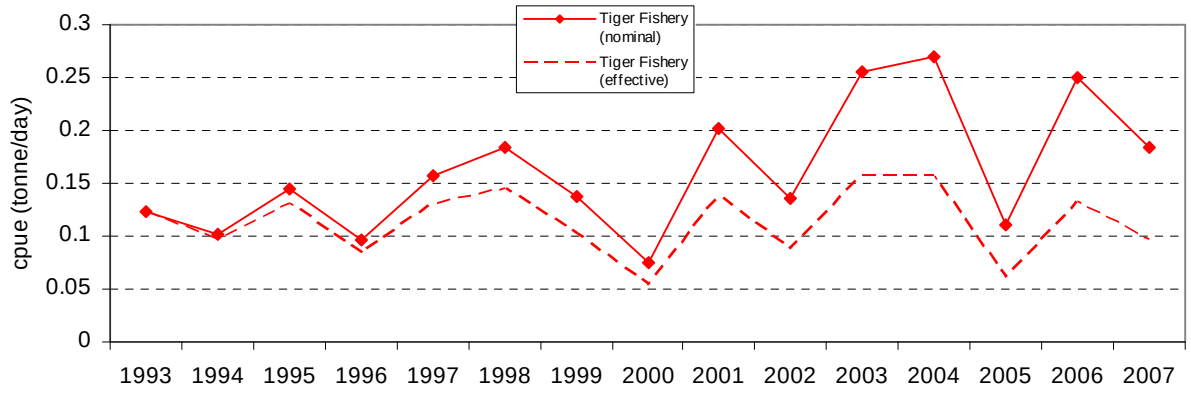

Figure 55c: Catch rate for the tiger prawn fishery in the Fog Bay area between 1993 and 2007.

Bonaparte

Banana prawn catches in the Bonaparte area decreased from 231 t in 2006 to 151 t in 2007. Catches of tiger prawn increased from 100 kg in 2006 to 4 t in 2007 and endeavour prawn increased from 1 t in 2006 to 4 in 2007 (Figure 56). Banana prawns comprised nearly 94% of the catch for 2007 in this area (Figure 57).

Effort in the banana fishery decreased from 254 days in 2006 to 206 days in 2007 (Figure 58a). The reduction in vessel numbers and the closure of the Joseph Bonaparte Gulf in the first season contributed to the reduction in banana prawn catches/ banana prawn fishing effort in 2007.

CPUE of banana prawn decreased from 0.91 t per day in 2006 to 0.73 t per day in 2007 (Figure 58b). Effort in the tiger prawn fishery increased from 0 days in 2006 to 20 days in 2007 (Figure 58a). Nominal and effective CPUE increased from 0 t per day in 2006, to 0.22 t per day and 0.12 t per day in 2007, respectively (Figure 58c).

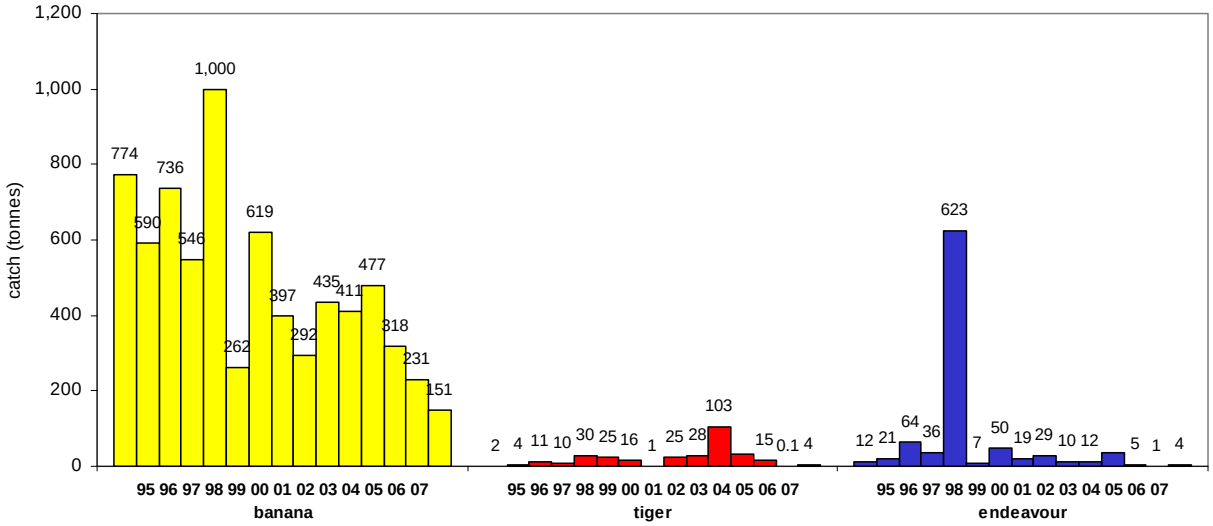

Figure 56: Catch by species in the Bonaparte area between 1995 and 2007.

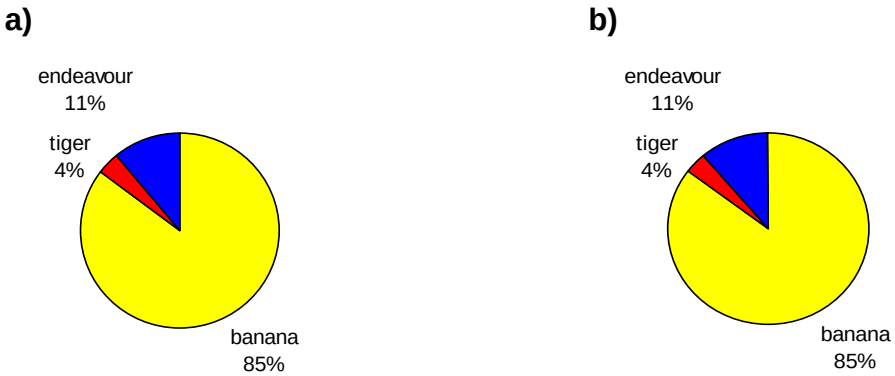

Figure 57: Percentage catch of prawn species in the Bonaparte area during 2007 (a) and percentage catch of prawn species in the Bonaparte area from 1993 to 2007 (b).

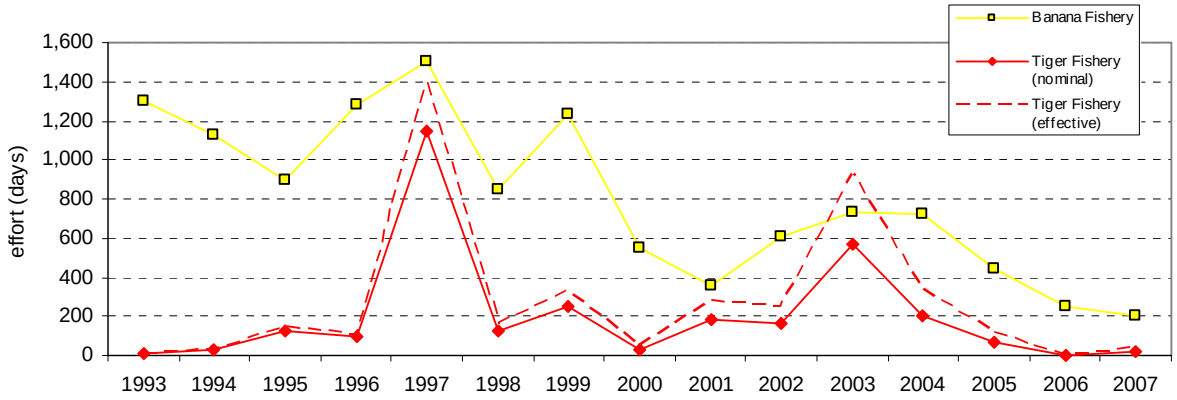

Figure 58a: Effort for the banana and tiger prawn fisheries in the Bonaparte area between 1994 and 2006.

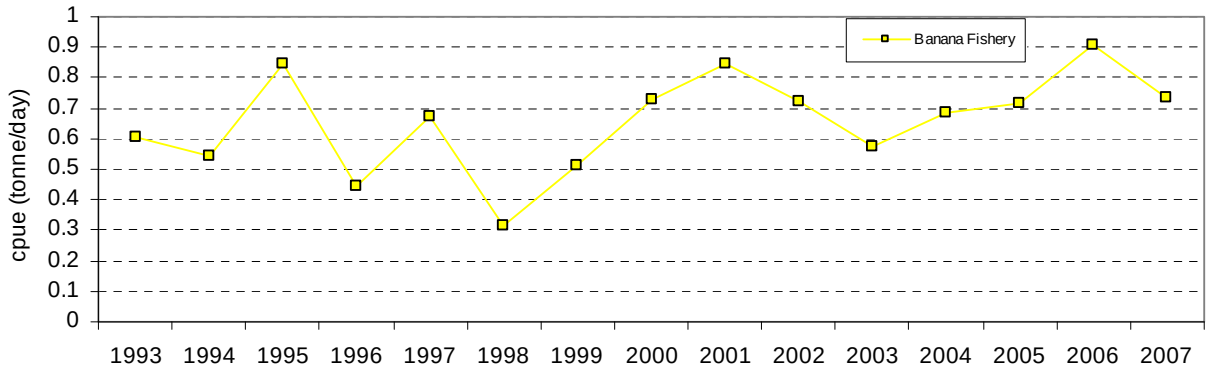

Figure 58b: Catch rate for the banana fishery in the Bonaparte area between 1993 and 2007.

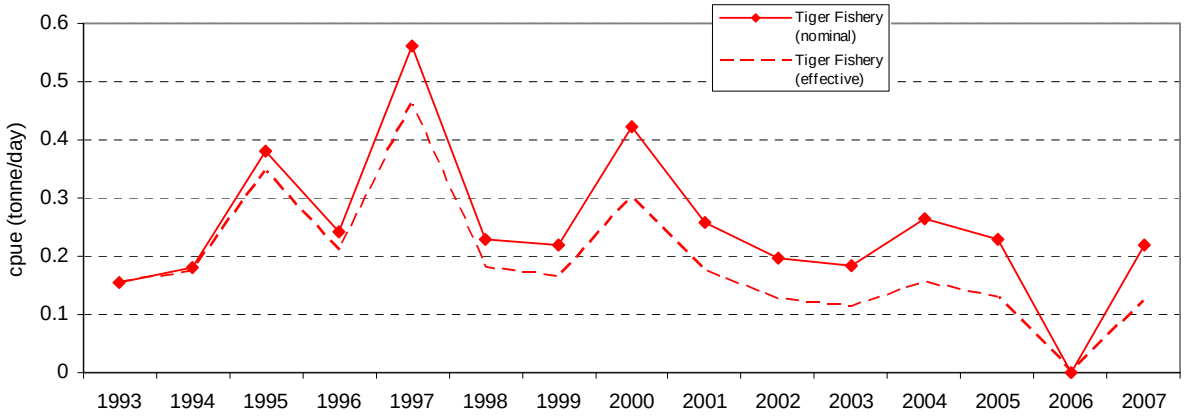

Figure 58c: Catch rate for the tiger prawn fishery in the Bonaparte area between 1993 and 2007.

Bycatch in the Northern Prawn Fishery

Turtle bycatch

Flatback turtles and unidentified species comprised most of the turtle bycatch (Figure 60). Turtle bycatch in the NPF was highest in Weipa with 17 turtles caught. All turtles were released alive (Figure 59). Survival rates improved in 2007 with no mortalities recorded, compared with two mortalities recorded in 2005, and one in 2006 (Table 5).

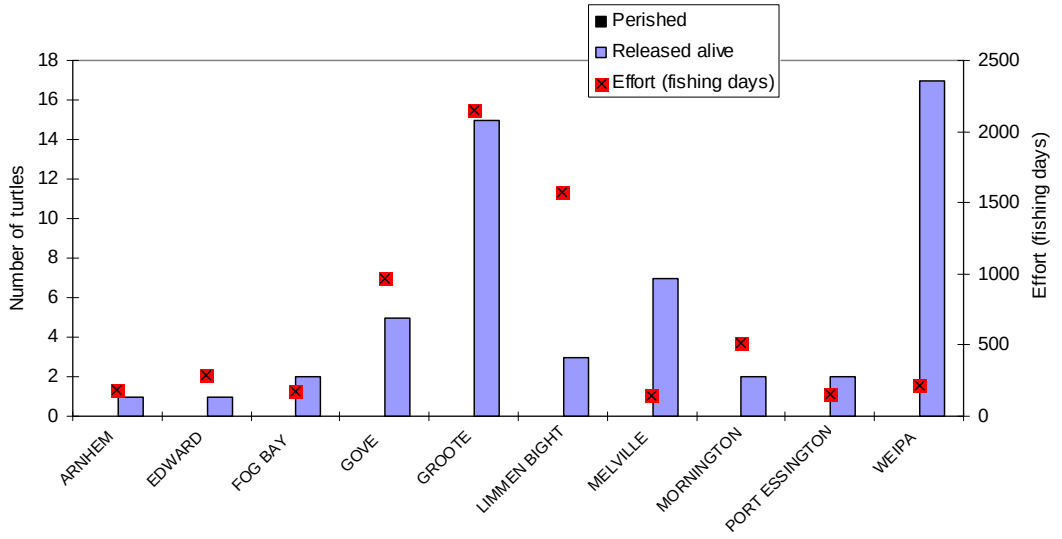

Figure 59: Turtle bycatch in the NPF by area in 2007.

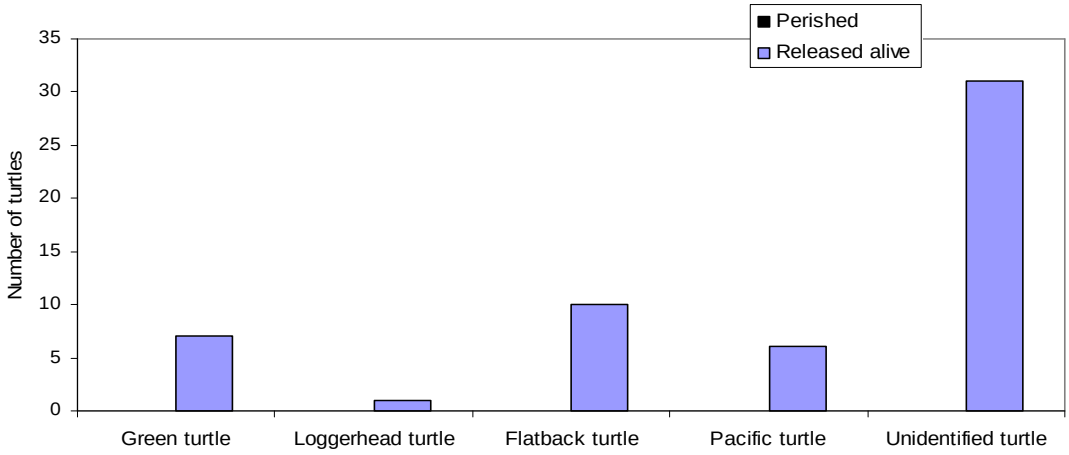

Figure 60: Turtle bycatch in the NPF by species in 2007.

Table 5: Turtle bycatch by species for each area, 2005-2007.

Statistical Area	Turtle Species	Released Alive			Perished			Condition Unknown		
		05	06	07	05	06	07	05	06	07
WEIPA	*Flatback*		2							
	Green		1	3						
	Loggerhead		1							
	Unidentified species		1	14						
ARNHEM	*Unidentified species*		1	1						
	Green		1							
	Pacific Ridley	1								
MORNINGTON	*Unidentified species*		1	1						
	Flatback	1	1							
	Green	2								
	Hawksbill		1		1			1		
	Pacific Ridley	1	2	1						
LIMMEN BIGHT	*Loggerhead*	1		1						
	Green	2	1							
	Hawksbill		3							
	Pacific Ridley	1	1							
	Unidentified species		4	2						
GROOTE	*Flatback*		2	8						
	Hawksbill		1							
	Green	4	2	1						
	Pacific Ridley			3						
	Unidentified species		1	3						
GOVE	*Flatback*	2	4	2	1			1		
	Green	2	1							
	Pacific Ridley		1	2						
	Unidentified species		3	1						
PORT ESSINGTON	*Hawksbill*		1							
	Green	1								
	Unidentified species			2						
MELVILLE	*Unidentified species*			7						
FOG BAY	*Green*	1	1	2						
EDWARD	*Green*		1	1						
TOTAL ALL AREAS	Flatback	4	12	10	1			1		
	Green	18	10	7						
	Hawksbill		6		1			1		
	Leatherback									
	Loggerhead	2	1	1		1				
	Pacific Ridley	3	5	6						
	unidentified species		10	31						
TOTAL	*ALL SPECIES*	27	43	55	2	1	0	2	0	0

Sea snake bycatch

The majority of sea snakes (4947 individuals representing 65%) were released alive, 1835 (24%) where their condition was unknown after release, and only 738 (10%) sea snakes perishing and 46 (0.6%) injured (Table 6). Sea snake bycatch was highest in Groote and lowest in Melville with 3,018 and 31 caught, respectively.

Table 6: Sea snake bycatch by area in the NPF for 2007.

Statistical area	Released alive	Perished	Released injured	Condition unknown	Total
ARNHEM	79	3		23	105
BOLD	200	35		68	303
BONAPARTE	137	70		128	335
EDWARD	49	8		97	154
FOG BAY	37	2		3	42
GOVE	1114	88	5	261	1478
GROOTE	2053	318	32	612	3018
KEERWEER	14	3		35	52
LIMMEN BIGHT	916	143	9	351	1421
MELVILLE	5			26	31
MITCHELL	98	35		86	219
MORNINGTON	143	28		36	207
PORT ESSINGTON	49			10	59
SWEERS	10	3		24	37
WEIPA	43	2		75	120
Total	**4947**	**738**	**46**	**1835**	**7581**

Scampi Catch

There was no reported catch of scampi in the 2007 year.

Scientific Observer and Crew Member Observer coverage

Comparison of Crew Member Observer (CMO), Scientific Observer and logbook recorded interactions with Threatened Endangered and Protected (TEP) species is detailed in Tables 7 and 8. Recorded interactions with all TEP species per boat day were lowest from logbook data (Table 8). Recorded interactions per boat day for seasnakes, sawfish and turtles were highest from CMO data, whilst syngnathid interactions per boat day were highest from Scientific Observer data (Table 8).

Table 7: Comparison of TEP species interactions reported by Scientific Observers, CMOs and in logbooks in the NPF during the 2007 tiger prawn season.

	Vessel returns	**Fishing days*** **	**Total sea snakes**	**Total turtles**	**Total syngnathids**	**Total sawfish**
Logbook returns	51	4829	6689	25	1726	9
Crew Member Observers	5	362	415	14	22	19
Scientific Observers**	5	118	55	0	148	2

*Reporting of sawfish interactions was not mandatory in logbooks during 2006.
**Scientific observer results includes data collected during fishing gear trials.
*** Days fishing practices were observed.

Table 8: Comparison of TEP species interactions reported by Scientific Observers, CMOs and in logbooks per boat day during in the NPF during the 2007 tiger prawn season.

	Seasnakes per boat day	Turtles per boat day	Syngnathids per boat day	Sawfish per boat day
Logbook returns	1.385	0.005	0.357	0.001
Crew Member Observers	1.146	0.038	0.060	0.052
Scientific Observers**	0.466	0	1.254	0.016

*Reporting of sawfish interactions was not mandatory in logbooks during 2006.
**Scientific observer results include data collected during gear trials.

State/Territory specific data

The Queensland and Western Australian recorded an increase in total prawn catch, increasing from 1656 to 2085 t and 232 to 298 t respectively. Total prawn catch in Northern Territory, decrease, with catch decreasing from 3417 to 2688 t in Northern Territory (Table 9).

Banana prawn catch show a similar pattern with catch increasing from 1384 t to 1839 t during 2006/07 in Queensland, and decreasing from 1495 t to 783 t in Northern Territory and from 231 t to 108 t in Western Australia (Table 9).

Tiger prawns prawn catch decreased in the Northern Territory and Queensland while it increased in Western Australia by a significant amount. Endeavour prawn catch decreased in both the Northern Territory and Western Australia while Queensland recorded the same catch. The king prawns catch in Queensland and the Northern Territory remain relatively similar with Queensland decrease by 1 t (Table 9).

Table 9: Prawn catch by State/Territory from 1990/91 to 2006/07 financial years.

State	*Financial year*	*banana (t)*	*tiger (t)*	*endeavour (t)*	*king (t)*	*Total catch (t)*
Queensland	1990/91	4646	1151	269	51	6117
	1991/92	1392	1710	548	30	3680
	1992/93	1857	968	357	18	3200
	1993/94	904	1032	416	8	2360
	1994/95	2540	1883	346	24	4791
	1995/96	2562	1570	761	23	4916
	1996/97	2050	1259	817	15	4141
	1997/98	1986	1318	878	11	4193
	1998/99	1548	634	335	5	2523
	1999/00	637	629	348	1	1614
	2000/01	3651	553	352	4	4560
	2001/02	3286	372	211	1	3869
	2002/03	1307	97	54	1	1459
	2003/04	1639	152	14	0	1806
	2004/05	1700	70	7	0	1777
	2005/06	1384	217	46	9	1656
	2006/07	**1839**	**192**	**46**	**8**	**2085**
Northern Territory	1990/91	1430	2156	380	46	4011
	1991/92	669	2332	434	27	3462
	1992/93	1639	1907	437	18	4000
	1993/94	697	1768	403	18	2886
	1994/95	1536	1855	423	19	3836
	1995/96	1072	1615	434	6	3127
	1996/97	1472	1184	387	9	3052
	1997/98	1241	1466	490	9	3206
	1998/99	1549	2141	778	6	4474
	1999/00	1247	1564	586	11	3408
	2000/01	2323	1546	489	3	4361
	2001/02	1789	1561	892	1	4244
	2002/03	1509	1797	333	2	3641
	2003/04	1437	1985	390	1	3813
	2004/05	838	1683	368	2	2890
	2005/06	1495	1587	316	19	3417
	2006/07	**783**	**1582**	**304**	**19**	**2688**
Western Australia	1990/91	579	86	42	0	707
	1991/92	231	8	11	0	250
	1992/93	498	5	6	0	508
	1993/94	828	4	13	0	845
	1994/95	414	2	16	0	432
	1995/96	713	18	65	0	796
	1996/97	1079	5	38	0	1122
	1997/98	756	66	686	1	1509
	1998/99	519	23	17	0	559
	1999/00	329	2	38	0	369
	2000/01	281	16	23	0	321
	2001/02	345	23	28	0	396
	2002/03	509	75	8	0	592
	2003/04	461	49	13	0	523
	2004/05	293	29	36	0	358
	2005/06	231	0.1	1	0	232
	2006/07	**108**	**190**	**0**	**0**	**298**

Byproduct of the NPF by State/Territory

Total byproduct retained in the NPF State/Territory was 204 t, with Queensland retaining the highest and Western Australia the lowest amount of byproduct. Squid comprised most of the by product, with 175 t of squid retained. Bugs, cuttlefishes, scallops and whitings also contributed substantially to retained byproduct (Table 10).

Table 10: Retained byproduct of the NPF by State/Territory in 2007.

Species	***NT (kg)***	***QLD (kg)***	***WA (kg)***	***Total (kg)***
Australian halibut	213			213
Bight Redfish		10		10
Black pomfret	72		7	79
Breams	3			3
Broad barred spanish mackerel - Grey mac		3		3
Bugs - Shovel nosed and slipper lobsters	6816	3306		10122
Cuttlefish	724	242		966
Cuttlefishes	2158	212		2370
Flathead	73			73
Goatfishes - Barbounia	1720	450		2170
Golden snapper - Fingermark seaperch	3			3
Herring	27			27
Longtail tuna	3			3
Mackerel		10		10
Mangrove Jack	722		50	772
Mantis shrimp	30			30
Mixed fish	41			41
Mixed prawns	26			26
Moreton Bay bugs	1826.8	273		2099.8
Mud scallop	30	170		200
Octopuses	22			22
Ray's Bream	10			10
Rock cods	6			6
Saddle-tailed sea perch - Crimson sea perch	69			69
Saucer scallops	6255			6255
Scallops	2080	434		2514
Sea Bream Snapper		1		1
Smallhead Hairtail	6			6
Soles	59			59
Spiny lobsters - Mixed crayfish		5		5
Squids	2061	172917		174978
Striped Sea pike / Pike	47			47
Swallow-Tail	12			12
Sweetlips	1			1
Whitings	337.56	500		837.56
Total	**25453**	**178533**	**57**	**204043**