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NORTHERN PRAWN FISHERY DATA SUMMARY 2005



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March 2006

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DATA SECTION

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Northern Prawn Fishery Data Summary 2005
March 2006

AFMA Logbook Program
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Preface

Scope of the Report

This data summary provides a broad outline of the catch and effort for the Northern Prawn Fishery (NPF). They are an important mechanism for providing feedback to stakeholders on the logbook data that they send to 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 data can be collected and managed better.

AFMA has produced data summary reports for the Northern Prawn Fishery (NPF) on an annual basis since 1992. The following data summary reviews the 2005 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 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:

Wade Whitelaw, Manager - NPF, AFMA (Canberra) - Ph (02) 6272 5039.

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



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Introduction

The Northern Prawn Fishery Data Summary 2005 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 Off-shore Constitutional Settlements with Queensland, the Northern Territory and Western Australia. Turtle and sea snake bycatch is 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 (Figure 1).

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. Groundchains 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 NPF 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

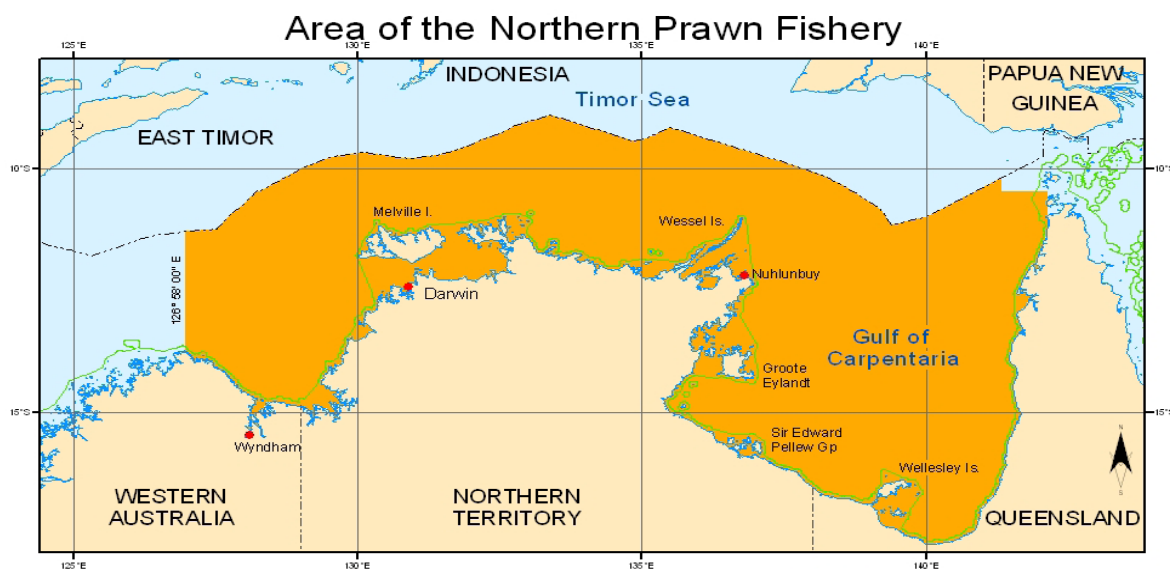


Figure 1. Northern Prawn Fishery Management Area



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 Northern Prawn Fishery Management Plan 1995 (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 early 2005 the effort was further reduced in the fishery through a 25% reduction in the value of the gear SFR. This has resulted in a fleet reduction to around 85 vessels in 2005.

Species

The Fishery targets nine commercial species of prawns including white banana (*Fenneropenaeus merguensis*), 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.

The fishery is split into two seasons. For 2005, the seasons were from 9 April to 21 May (Banana season) and from 1 August to 15 November (Tiger season) respectively.

Data Collection Program

Northern Prawn Fishery operators are required to complete the 'Northern and Torres Strait Prawn Fisheries Daily Fishing Log' (NP14) on a daily basis. Around twenty operators (27 in the Tiger season) used electronic logbook reporting in 2005. These electronic logbook data are 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 (NP14 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 on 14th February 2006 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. Eighty six vessels from a total of 89 had catches from logbooks totalling within 10% of the catch recorded in the landing returns for banana and tiger prawns. At the time of extraction, 100% of logsheets and 98% of landing data had been received. No days were missing because of lost logsheets.

Over the entire fleet, the logbook figures for banana and tiger prawns were a little higher than the landings figures (by 0.35% and 1% respectively). For endeavour prawns, the logbook figures were a little higher than the landings (by 2%). The logbook figures for king prawns were lower than the landings by 5%.

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. Days fishing where vessels have been searching, but have not supplied details of the area searched, have not been included in the effort figures (92 days in the 2005 season).

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

Statistics for the NPF were collected from vessels that fished between Cape York (Queensland) and Cape Londonderry (Western Australia) (Figure 1).

The 2005 NPF seasons were from 9 April to 21 May and 1 August to 15 November. There were 43 days available to fish during the first season and 107 during the second season (a total of 150), which was 16 days more than 2004. This was due to the second season extended by 2 weeks. Total effort days in 2005 was 11,331 days compared to 11,778 in 2004.

The total NPF prawn catch for 2005 was 4,946 tonnes, compared with 5,686 tonnes in 2004 and 5,898 tonnes in 2003 (Table 1). The catch of banana prawns decreased compared to the previous year by 18% to 2,901 tonnes. The catch of tiger prawns decreased from 1,767 tonnes in 2004 to 1,744 in 2005. Endeavour prawns decreased from 396 tonnes in 2004 to 281 tonnes. The catch of king prawns increased to 20 tonnes from 3 tonnes in 2004.

Catch

The catch in the banana prawn fishery decreased by 613 tonnes (18%) in 2005 to 2,886 tonnes. The tiger prawn fishery catch decreased by 397 tonnes (19%) to 1,748 tonnes (Figure 2).

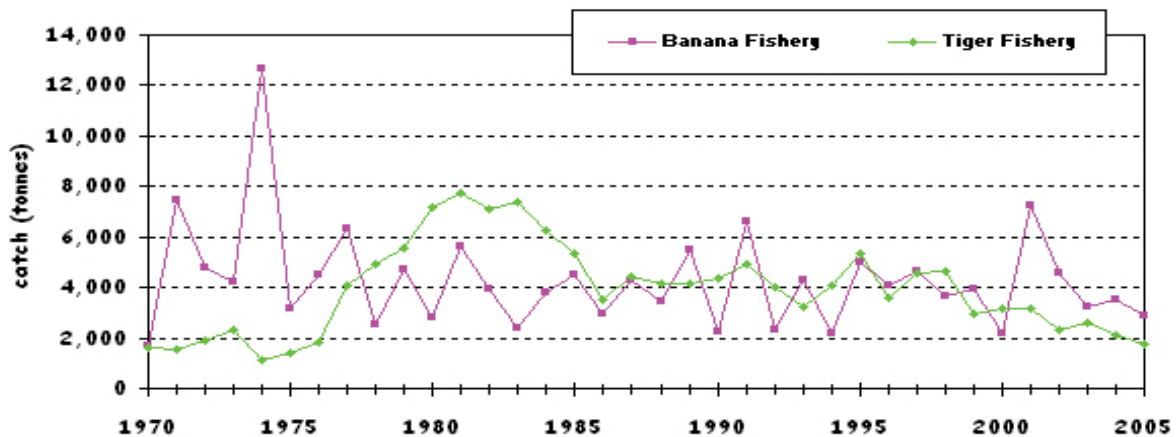


Figure 2. Catch in the banana and tiger prawn fisheries between 1970 and 2005

Source: AFMA logbook data adjusted to annual reconciled landing figures



Table 1. Annual reconciled landings, effort and vessel numbers from 1970 to 2005.

Source: Annual reconciled landings figures and AFMA Logbook data

<i>year</i>	<i>banana (tonnes)</i>	<i>tiger (tonnes)</i>	<i>endeavour (tonnes)</i>	<i>king (tonnes)</i>	<i>total catch (tonnes)</i>	<i>no. of vessels</i>	<i>banana fishery effort (days)</i>	<i>tiger fishery effort (days)</i>
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
70- '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
80- '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
90- '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
00-05 average	3946	1975	606	8	6532	106	4259	9360



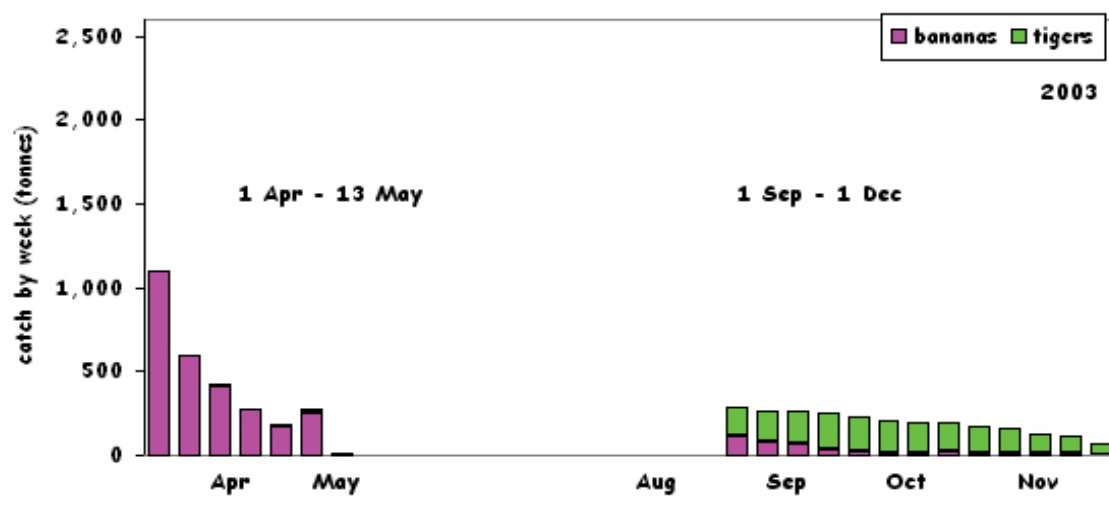


Figure 3a. Weekly catches of banana and tiger prawns (tonnes) in 2003

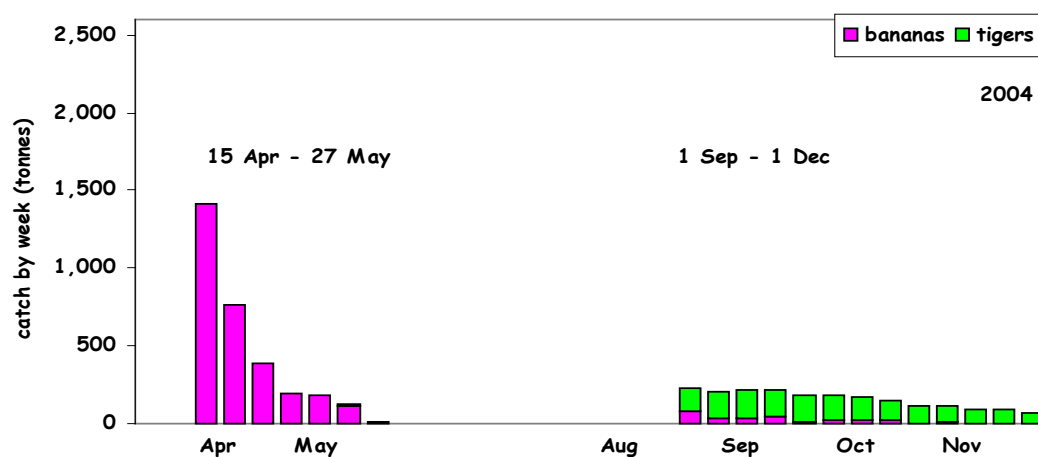


Figure 3b. Weekly catches of banana and tiger prawns (tonnes) in 2004

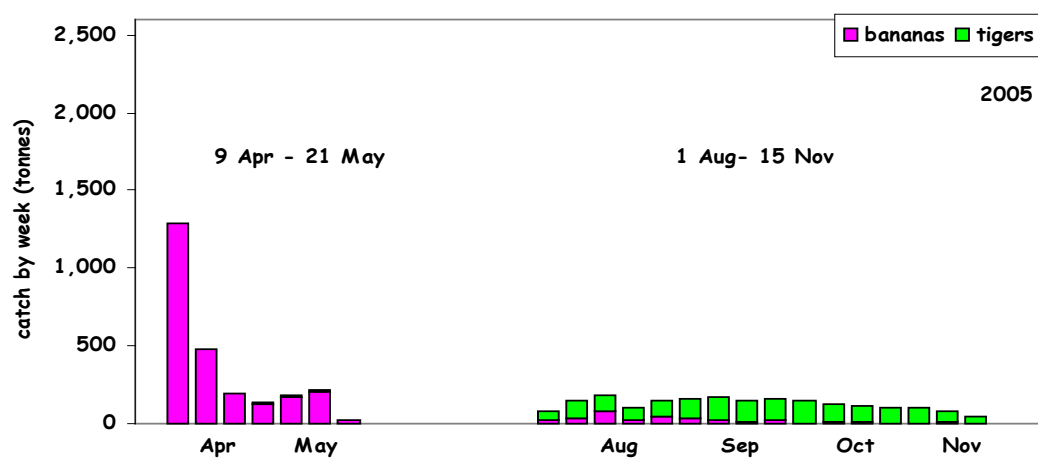


Figure 3c. Weekly catches of banana and tiger prawns (tonnes) in 2005

Source: AFMA Logbook data



Catch by Week

Figures 3 (a), (b) and (c) show the catch of banana and tiger prawns by week during 2003, 2004 and 2005. The highest catches of Banana prawns were recorded in the first week of the 2005 banana season, while Tiger prawn catches were typically highest in September, rather than August.

Effort

Nominal Effort 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 621 days (16%). In the tiger fishery, nominal effort increased by 174 days (2%) due to the 2 week extension of the second season (Figure 4).

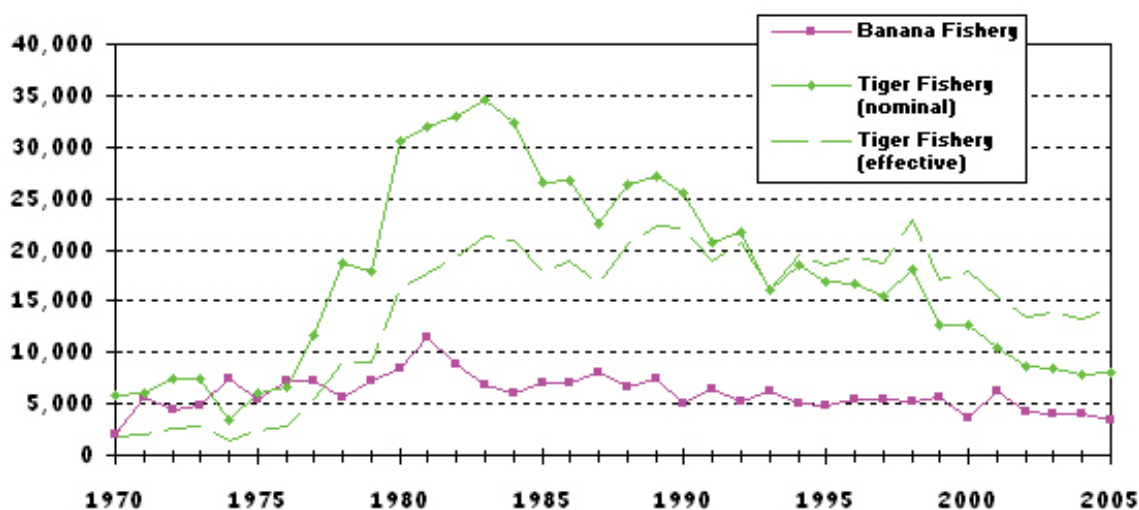


Figure 4. Effort in the banana and tiger prawn fisheries between 1970 and 2005.

Source: AFMA Logbook data



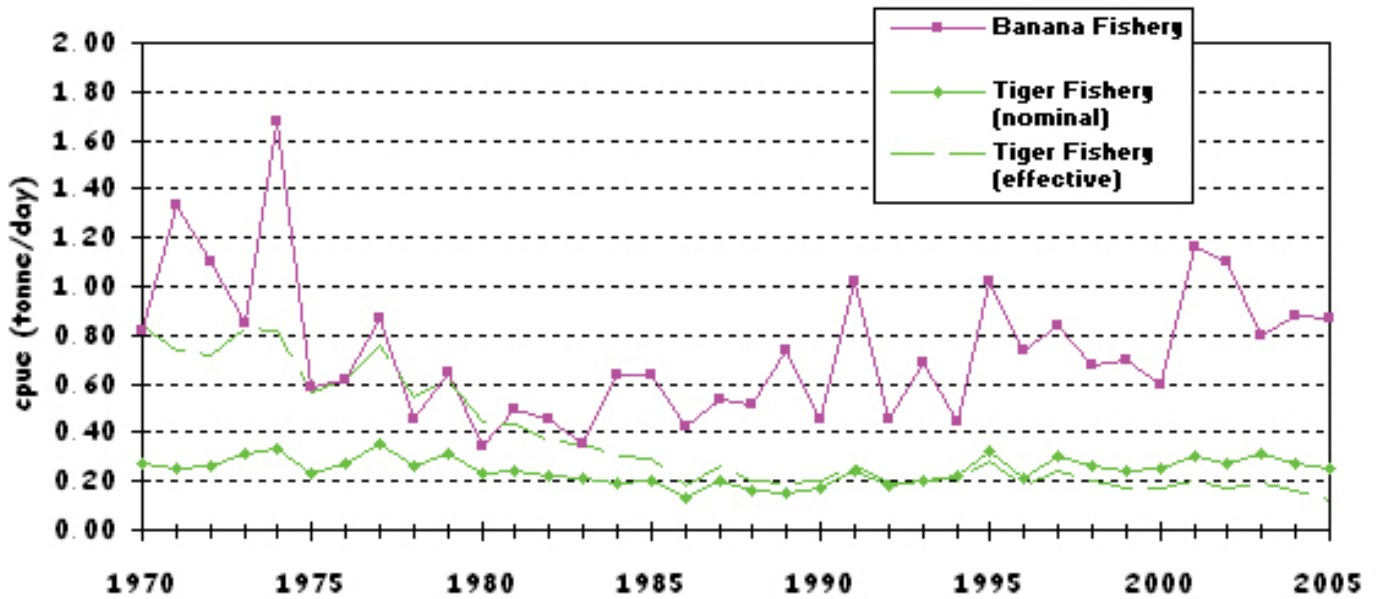


Figure 5. Catch rate in the banana and tiger prawn fisheries between 1970 and 2005.

Source: AFMA Logbook data adjusted to reconciled landings figures

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/day may be affected. Decreases in CPUE are therefore not necessarily a reflection of poor catch rates. The banana fishery catch rate decreased slightly from 0.88 tonne/day in 2004 to 0.87 tonne/day in 2005. The nominal catch rate for the tiger fishery decreased by 8% to 0.25 tonne/day while the effective catch rate decreased by 24% to 0.12 tonne/day (Figure 5).

Catch, Effort and Catch Rate by Month

Monthly catches (Table 2) for all species increased in August possibly due to the second season commencing early on August 1st compared to September 1st in 2004. Catches of Banana Prawns were lower compared with 2004 for all other months. Catches were also slightly lower for Tiger Prawns (<1%) compared with 2004. Catches of Endeavor prawns were higher in April and May (up by 14% in April and 83% in May, but lower in September through November (down by 82% in November).



Catch (tonnes)	Apr	May	Aug	Sep	Oct	Nov	Grand Total
<i>banana</i>	1,999	491	277	84	24	10	2,885
<i>tiger</i>	5	31	450	606	503	148	1,743
<i>endeavour</i>	8	11	121	46	63	36	285
<i>king</i>	0	0	15	1	2	0	18
Total	2,012	533	863	737	592	194	4,931

Table 2. Monthly catch by species in 2005

Source: AFMA Logbook data

Table 3 shows effort by month in the Banana and Tiger fisheries for 2005. Catch rates (tonnes/day) for 2005 in the banana fishery were highest in April and lowest in November. Tiger fishery catch rates were highest in September and lowest in November and May (Table 4).

Effort (days)	Apr	May	Aug	Sep	Oct	Nov	Grand Total
<i>Banana Fishery</i>	1638	1189	273	158	71	35	3,364
<i>Tiger Fishery (nomi- nal)</i>	25	161	2,201	2,230	2,383	949	7,949
<i>Tiger Fishery (effec- tive)</i>	45	289	3,953	4,005	4,280	1,704	14,276
Total	1708	1639	6427	6393	6734	2688	25589

Table 3. Monthly effort in the banana and tiger prawn fisheries in 2005

Source: AFMA Logbook data



CPUE (tonne/day)	<i>Apr</i>	<i>May</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>
<i>Banana Fishery</i>	1.22	0.41	1.01	0.53	0.34	0.29
<i>Tiger Fishery (nominal)</i>	0.20	0.19	0.20	0.27	0.21	0.16
<i>Tiger Fishery (effective)</i>	0.11	0.11	0.11	0.15	0.12	0.09

Table 4. Monthly catch rate for all species in the banana and tiger prawn fisheries in 2005

Source: AFMA Logbook data

Vessel and Gear Information

Vessel Length

The most common NPF vessel length in 2005 was between 22.00-22.99 metres (Figure 6).

Distribution of Catch By Vessel

In the first season of 2005, 27 vessels (28%) caught between 30 and 39 tonnes. Twenty-five percent caught above this amount and 46% caught 29 tonnes or below (Figure 7a). In the second season, 58 vessels (61%) caught between 20-29 tonnes, 23% caught between 30-39 tonnes, seven boats caught above 39 tonnes and eight vessels caught less than 20 tonnes (Figure 7b).

Average Catch per Vessel

The average catch per vessel for all prawns fell slightly to 57 tonnes per vessel in 2005 (Figure 8a). The average catch per vessel for banana prawns in 2005 decreased to 33 tonnes per vessel (Figure 8b), while that of tiger prawns (Figure 8c) increased slightly to 20 tonnes per vessel in 2005.



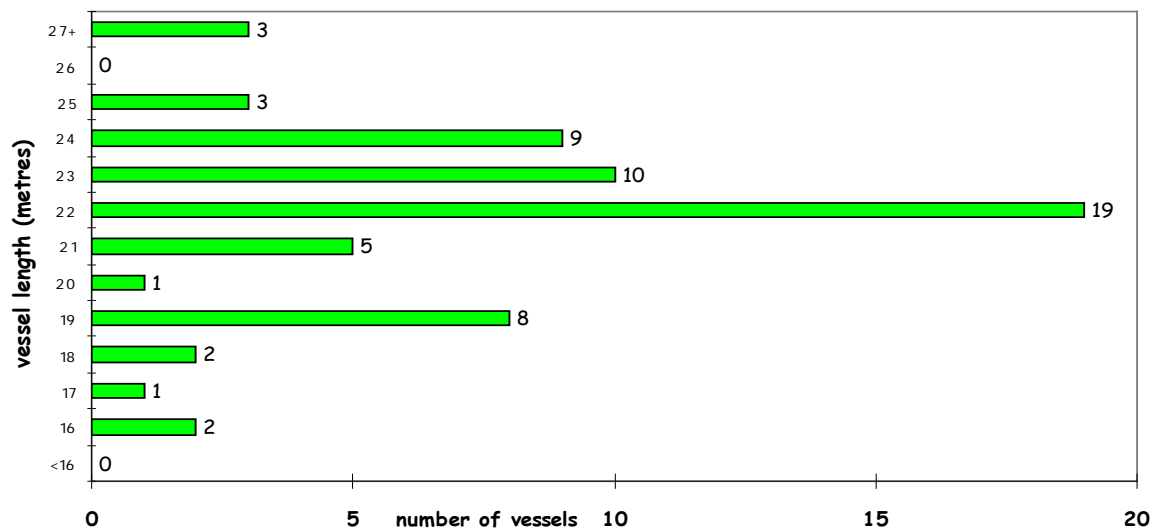


Figure 6. Frequency of vessels lengths in the NPF fleet in 2005

Source: AFMA licensing data

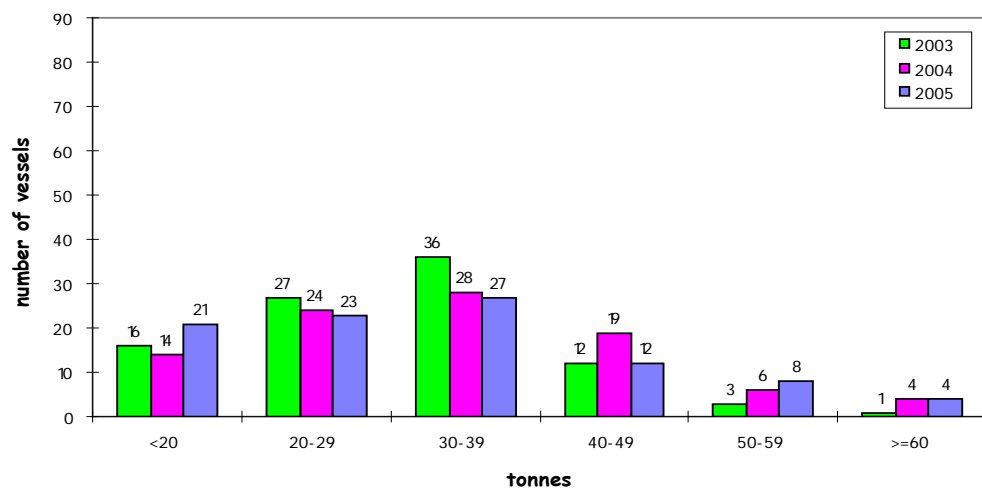


Figure 7a. Distribution of total catch by vessel in the first season, 2003 to 2005

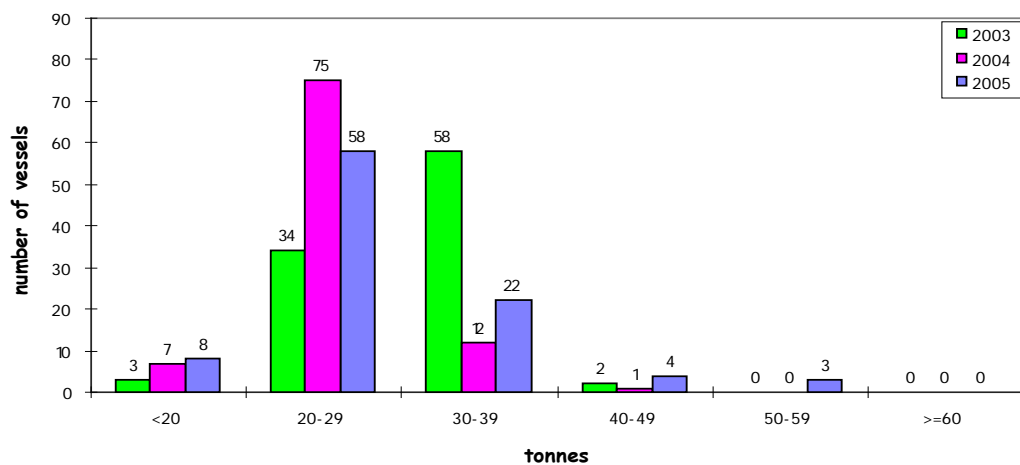


Figure 7b. Distribution of total catch by vessel in the second season, 2003 to 2005



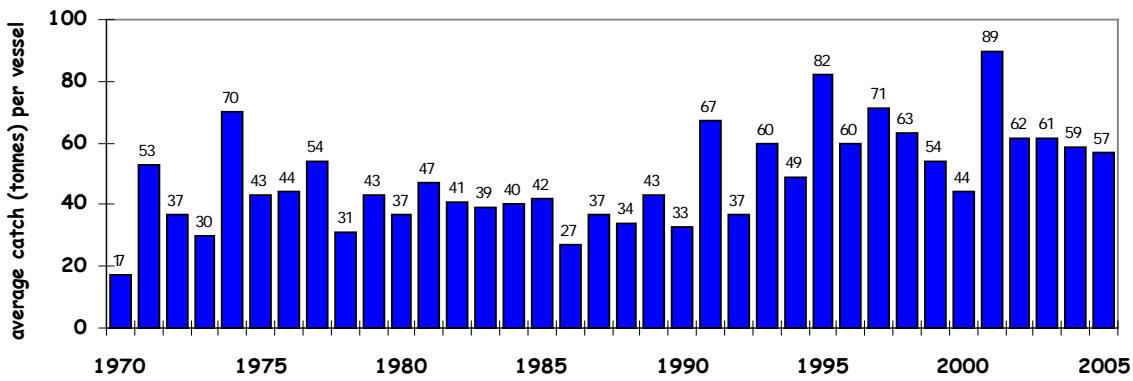


Figure 8a. Average total catch for all prawns per vessel from 1970 to 2005

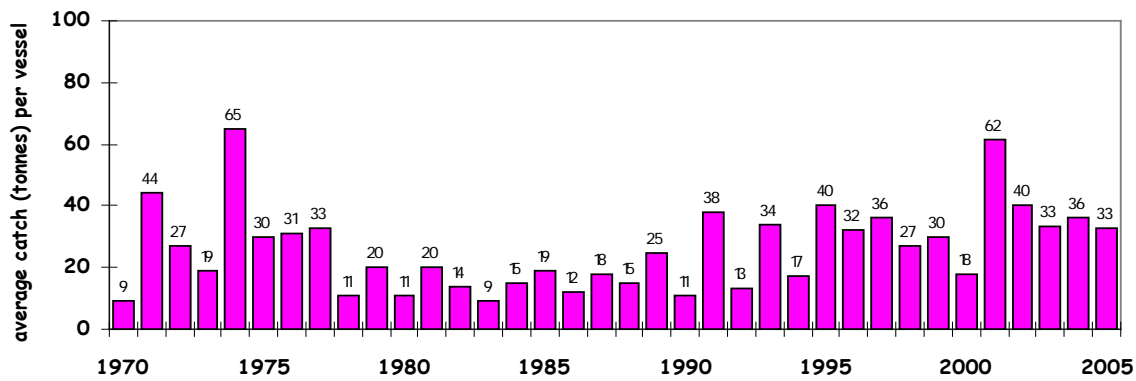


Figure 8b. Average total catch of banana prawns per vessel from 1970 to 2005

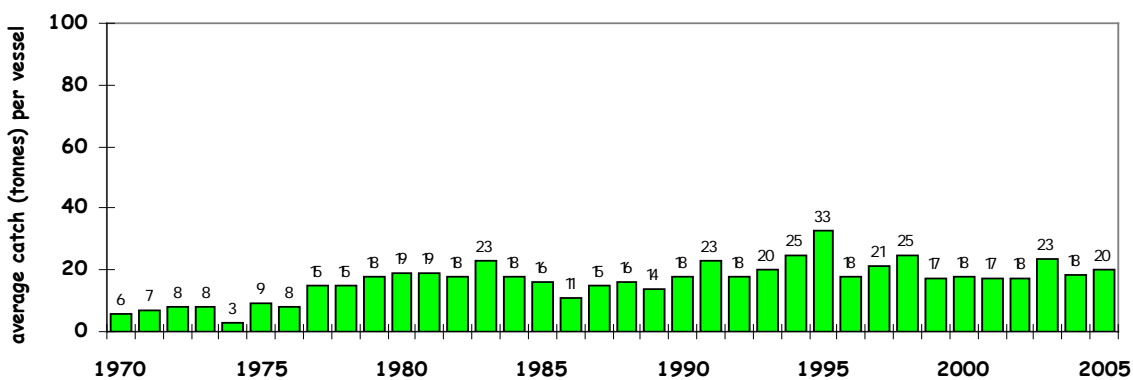


Figure 8c. Average total catch of tiger prawns per vessel from 1970 to 2005

Source: AFMA logbook data



Gear

Total tiger headrope in 2005 fell to 1,676 fathoms (3.06km) compared to 2,139 (3.9km) in 2004 (Figure 9). This was due to a 25% reduction in the value of a gear SFR.

In 2005 the mode headrope length per vessel was between 19 and 21 fathoms with around 30% of the fleet using this length compared with 2004 where the mode was between 22 and 23.9 fathoms (40.2 and 43.7m) with approximately 48% of the fleet using this length (Figure 10). The mean headrope length was 18.83 fathoms (34.4 metres) in 2005 compared with 22.3 fathoms (40.8m) in 2004.

Note - The gear information presented is only based on the 82 vessels out of a total of 89 that returned fully completed gear sheets for the 2005 season. Also, gear units for both seasons in 2002 are presented due to an effort (headrope units) reduction of 25% between the two seasons.

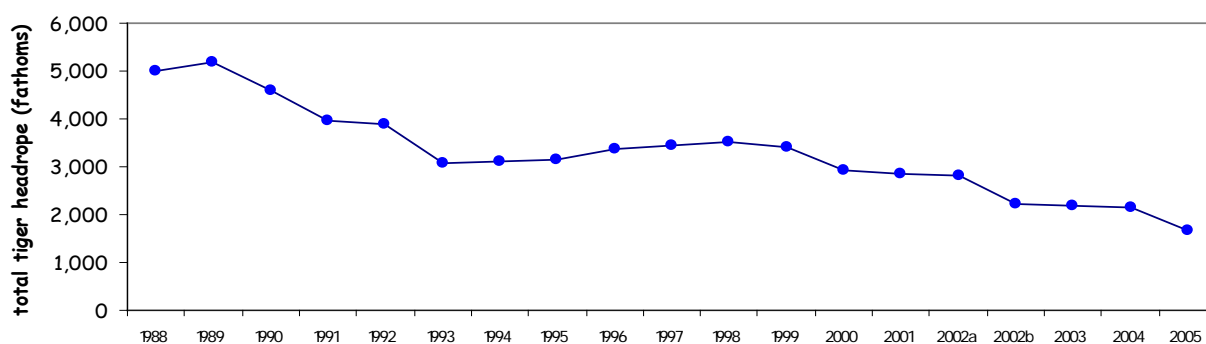


Figure 9. Total tiger headrope length from 1988 to 2005

Source: AFMA logbook data

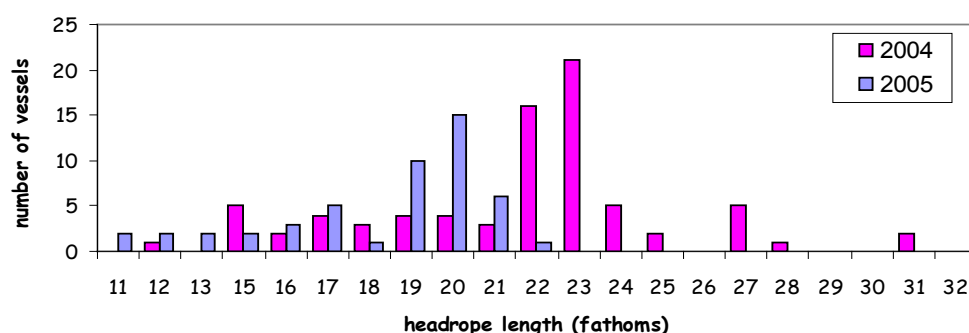


Figure 10. Frequency of tiger headrope length in 2004 and 2005

Source: AFMA logbook data



Catch and Effort by Statistical Area in the NPF

General

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 Bold area with 643 tonnes (Figure 12). The highest catch of tiger prawns was recorded in the Groote area with 576 tonnes (Figure 13). Due to the recent 25% reduction in headrope length that came into effect at the start of the first season in 2005, “catch rate”, measured in terms of Catch Per Unit Effort (CPUE) being tonnes/day may be affected. Decreases in CPUE are therefore not necessarily a reflection of poor catch rates.

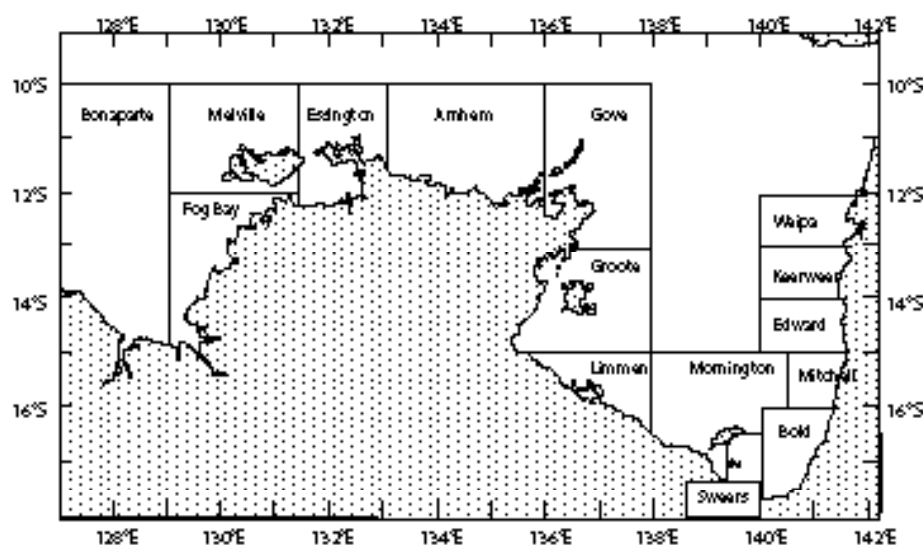


Figure 11. Statistical Areas of the Northern Prawn Fishery



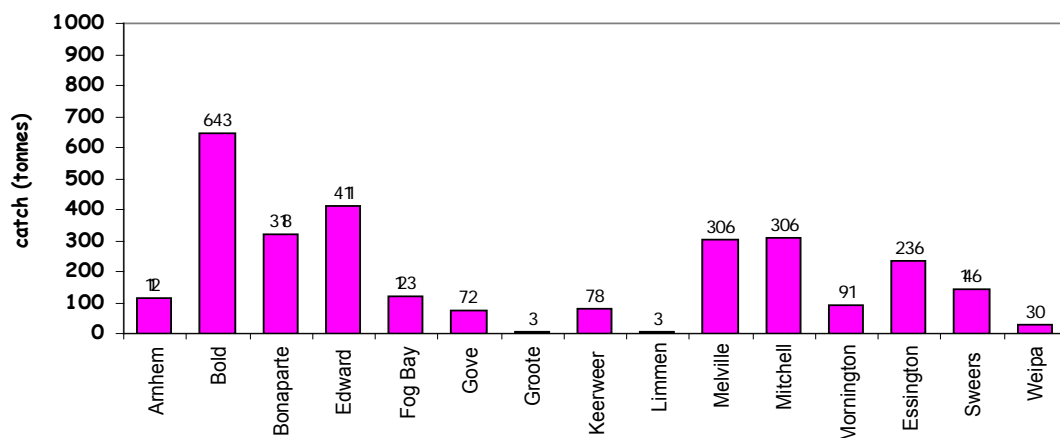


Figure 12. Catch of banana prawns in each statistical area of the NPF in 2005
Source: AFMA logbook data

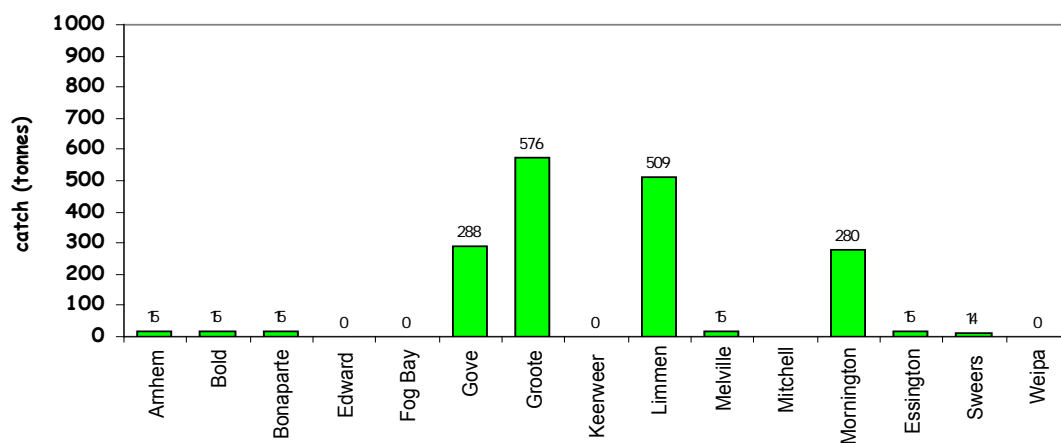


Figure 13. Catch of tiger prawns in each statistical area of the NPF in 2005
Source: AFMA logbook data



Weipa

Banana prawn catch decreased significantly from 138 tonnes in 2004 to 29 tonnes in 2005. Tiger prawn catches remained the same at 50kg and catch of endeavour prawns decreased to 13kg, from 20kg in 2004. (Figure 14a). Banana prawns dominated the catch in this area (Figure 14b).

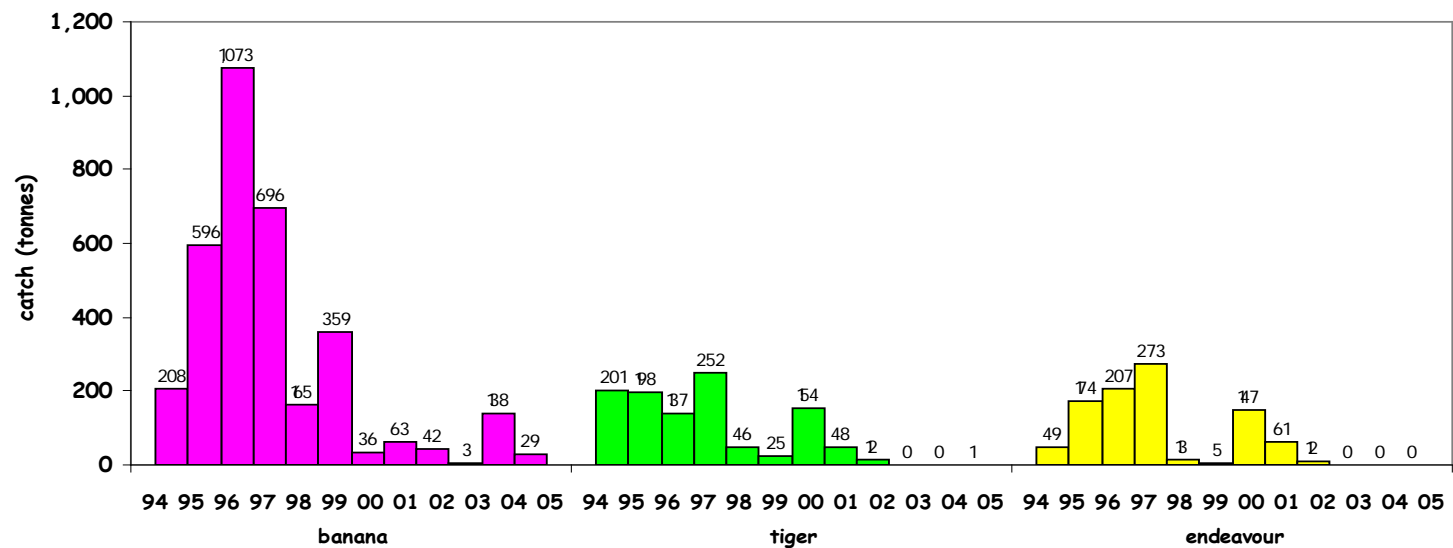


Figure 14a. Catch by species in the Weipa area between 1994 and 2005

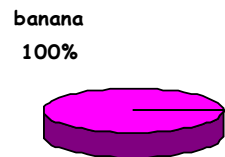


Figure 14b. Percentage catch by species in the Weipa area in 2005
Source: AFMA logbook data

Effort in the banana fishery decreased to 75 days in 2005 from 120 days in 2004. Effort in the tiger fishery increased to 5 days in 2005 compared with 2 days in 2004 (Figure 15a-c).

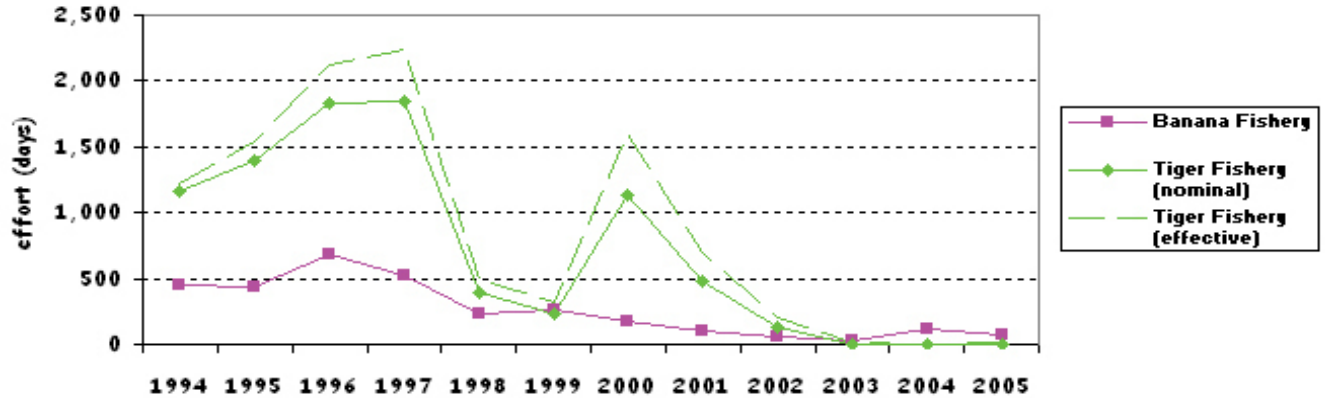


Figure 15a. Effort in the banana and tiger prawn fisheries in the Weipa area between 1994 and 2005



Figure 15b. Catch rate in the banana prawn fishery in the Weipa area between 1994 and 2005

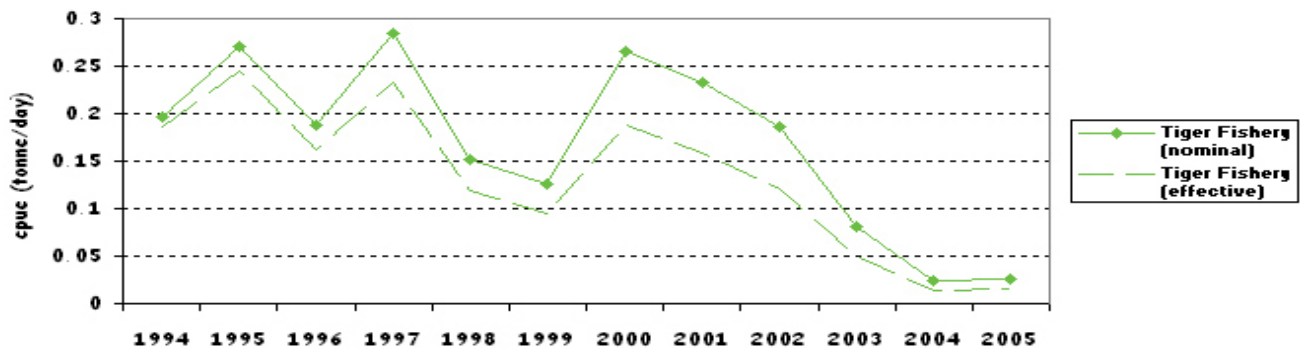


Figure 15c. Catch rate in the tiger prawn fishery in the Weipa area between 1994 and 2005

Source: AFMA logbook data



Keerweer

Prawn catches during 2005 in the Keerweer area were consistent with 2004. Banana prawn catch increased slightly to almost 78 tonnes, while catches of tiger and endeavour prawns remained at almost zero (Figures 16a & 16b).

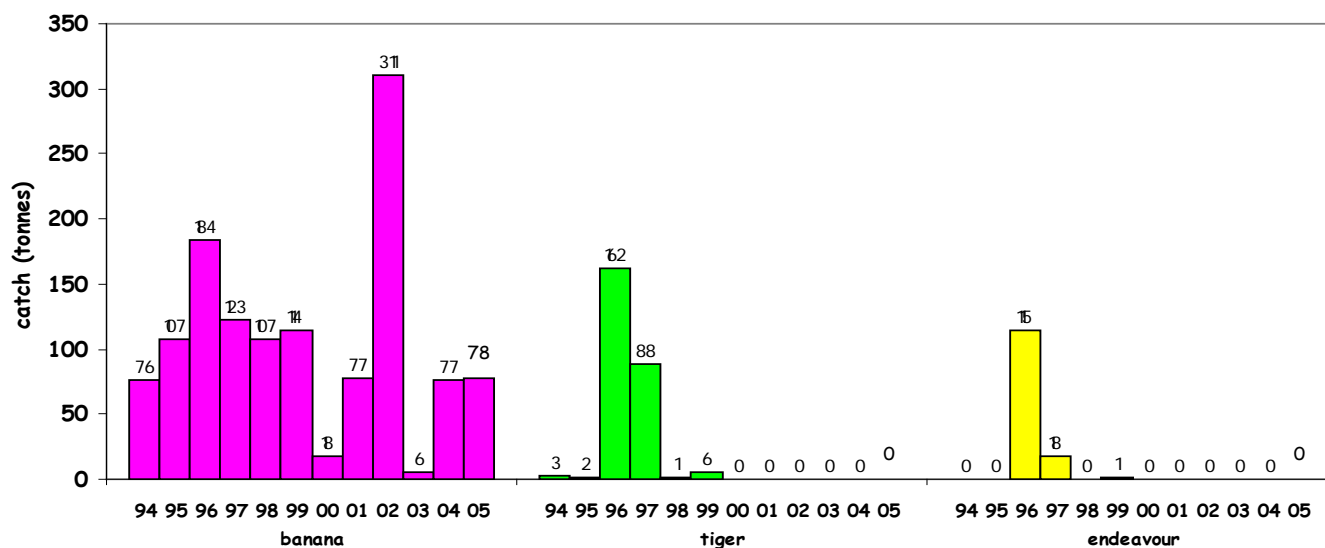


Figure 16a. Catch by species in the Keerweer area between 1994 and 2005



Figure 16b. Percentage catch by species in the Keerweer area in 2005

Source: AFMA logbook data



Effort directed at banana prawns was 85 days, a reduction on the 125 days recorded in 2004. One day of effort was recorded in the tiger fishery (Figure 17 a-c).

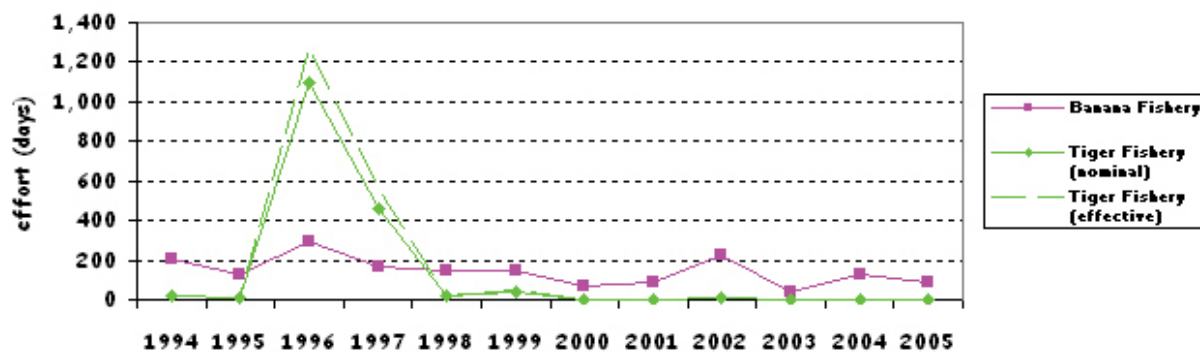


Figure 17a. Effort in the banana and tiger prawn fisheries in the Keerweer area between 1994 and 2005

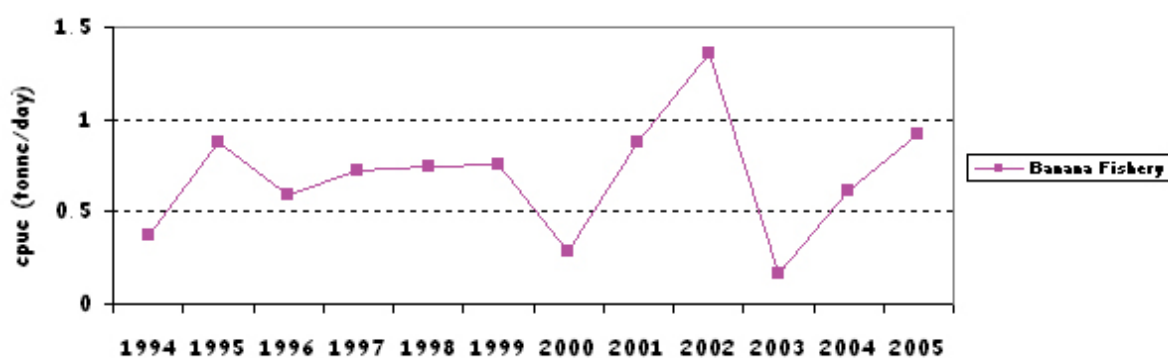


Figure 17b. Catch rate in the banana prawn fishery in the Keerweer area between 1994 and 2005

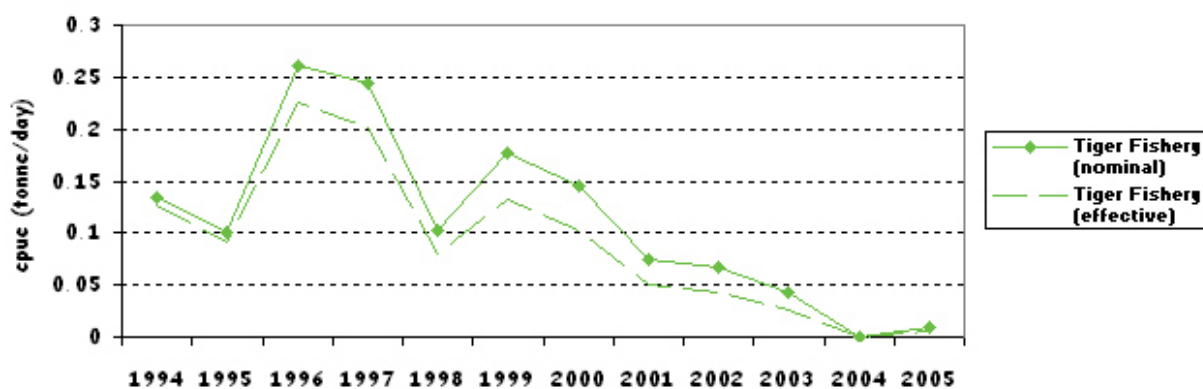


Figure 17c. Catch rate in the tiger prawn fisheries in the Keerweer area between 1994 and 2005

Source: AFMA logbook data



Edward

The banana prawn catch in the Edward area increased significantly to 411 tonnes in 2005 (compared with 151 in 2004). No changes were recorded for endeavour or tiger prawns being near zero (Figures 18a & 18b).

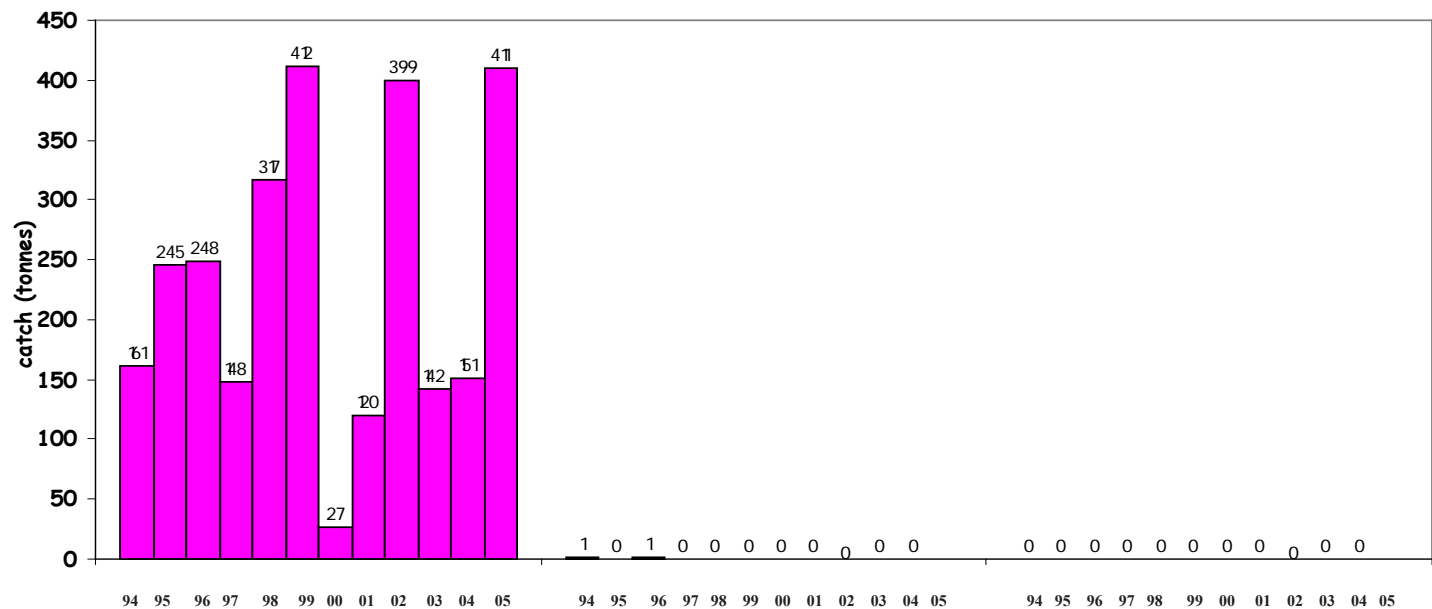


Figure 18a. Catch by species in the Edward area between 1994 and 2005

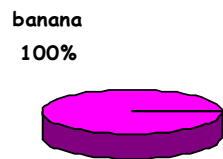


Figure 18b. Percentage catch by species in the Edward area in 2005
Source: AFMA logbook data

In 2005, effort for this region was up to 330 days for the banana fishery and remained at zero for the tiger fishery (Figures 19a-c).

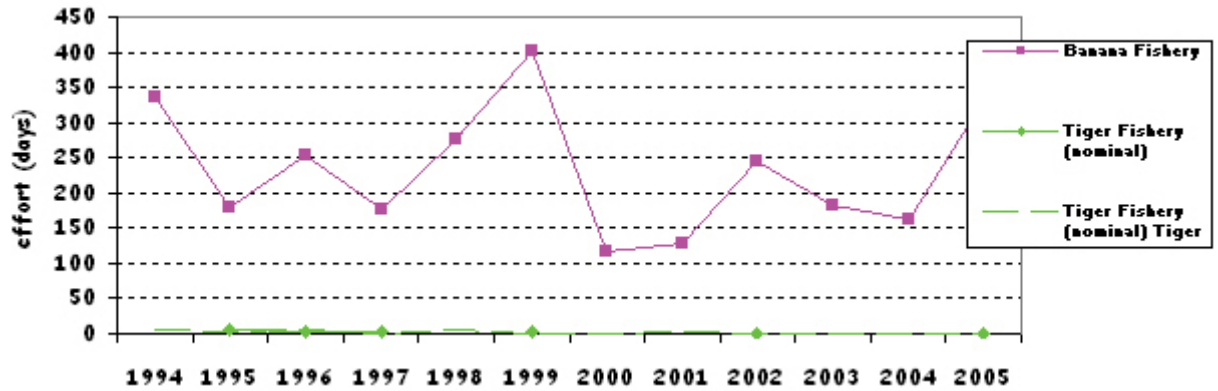


Figure 19a. Effort in the banana and tiger prawn fisheries in the Edward area between 1994 and 2005



Figure 19b. Catch rate in the banana prawn fisheries in the Edward area between 1994 and 2005

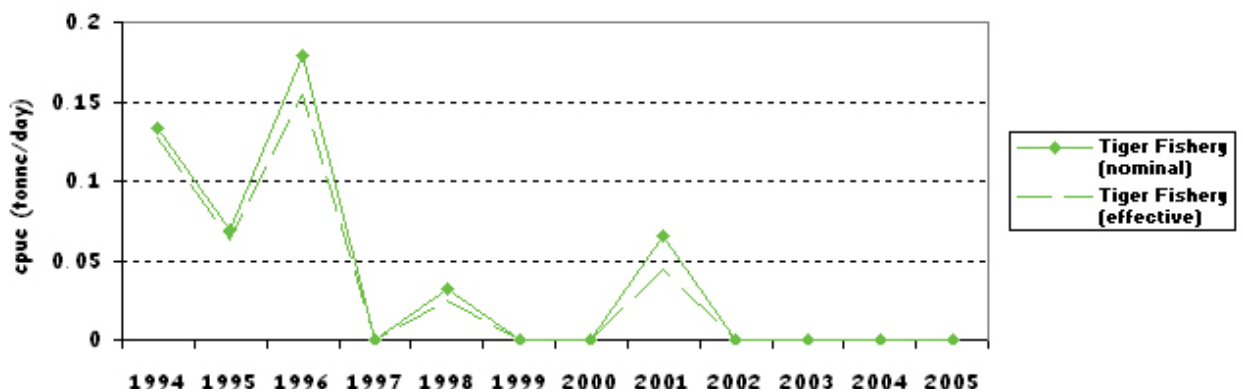


Figure 19c. Catch rate in the tiger prawn fisheries in the Edward area between 1994 and 2005

Source: AFMA logbook data



Mitchell

The banana prawn catch in the Mitchell area was 306 tonnes, down 33% from last year. Catches of tiger and endeavour prawns remained at virtually nil (Figures 20a & 20b).

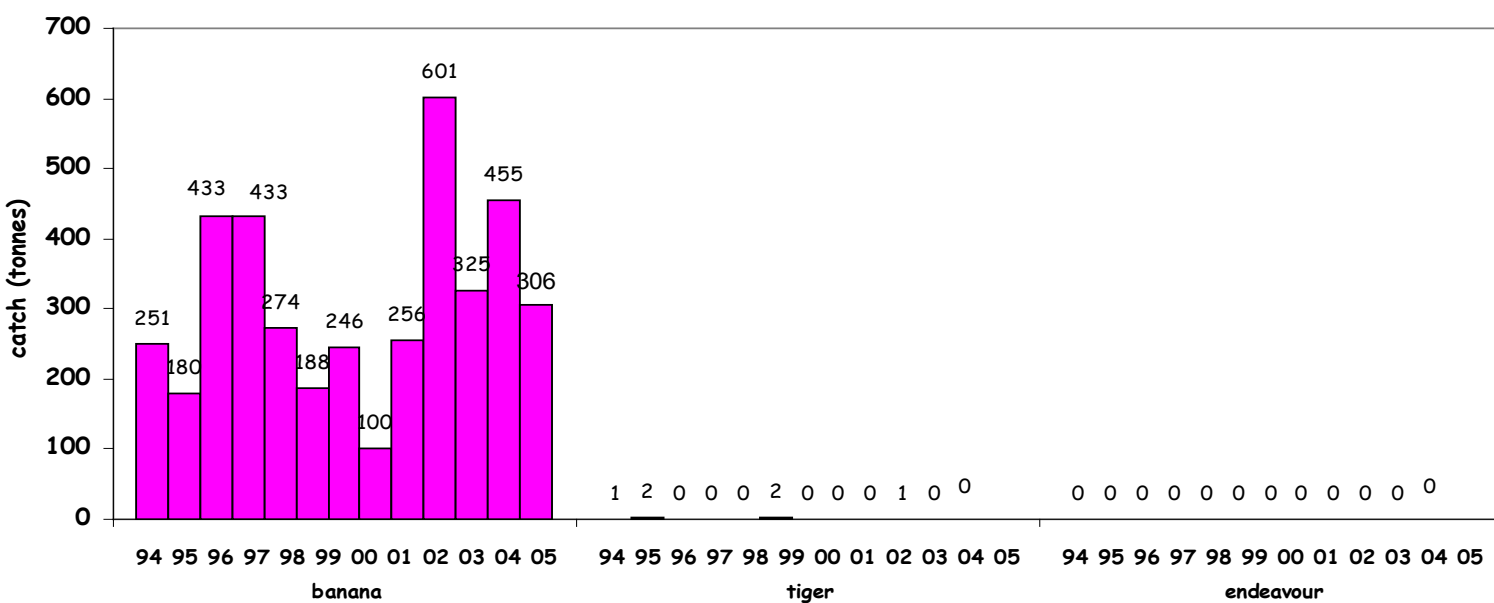


Figure 20a. Catch by species in the Mitchell area between 1994 and 2005



Figure 20b. Percentage catch by species in the Mitchell area in 2005

Source: AFMA logbook data



Effort directed at banana prawns was down 41% to 296 days in the Mitchell area. There was almost no effort directed at the tiger fishery in this area during the 2005 season (Figure 21a-c).



Figure 21a. Effort in the banana and tiger prawn fisheries in the Mitchell area between 1994 and 2005



Figure 21b. Catch rate in the banana prawn fisheries in the Mitchell area between 1994 and 2005

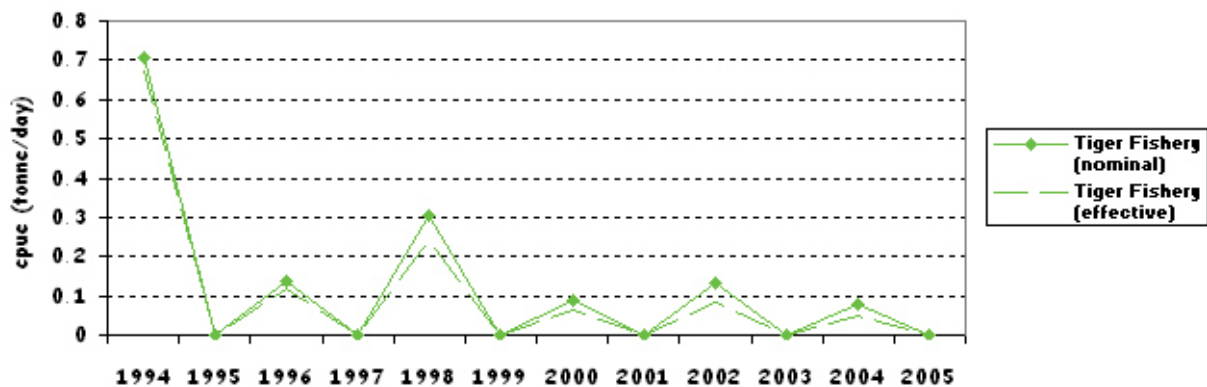


Figure 21c. Catch rate in the tiger prawn fisheries in the Mitchell area between 1994 and 2005

Source: AFMA logbook data



Bold

This area had the highest catch of banana prawns in the 2005 season: 643 tonnes, which was down 1% from the 2004 catch of 649 tonnes. The 2005 catch of tiger prawns increased to 15 tonnes (from 2 tonnes in 2004) and Endeavor prawns increased from zero in 2004 to 2 tonnes in 2005 (Figures 22a & 22b).

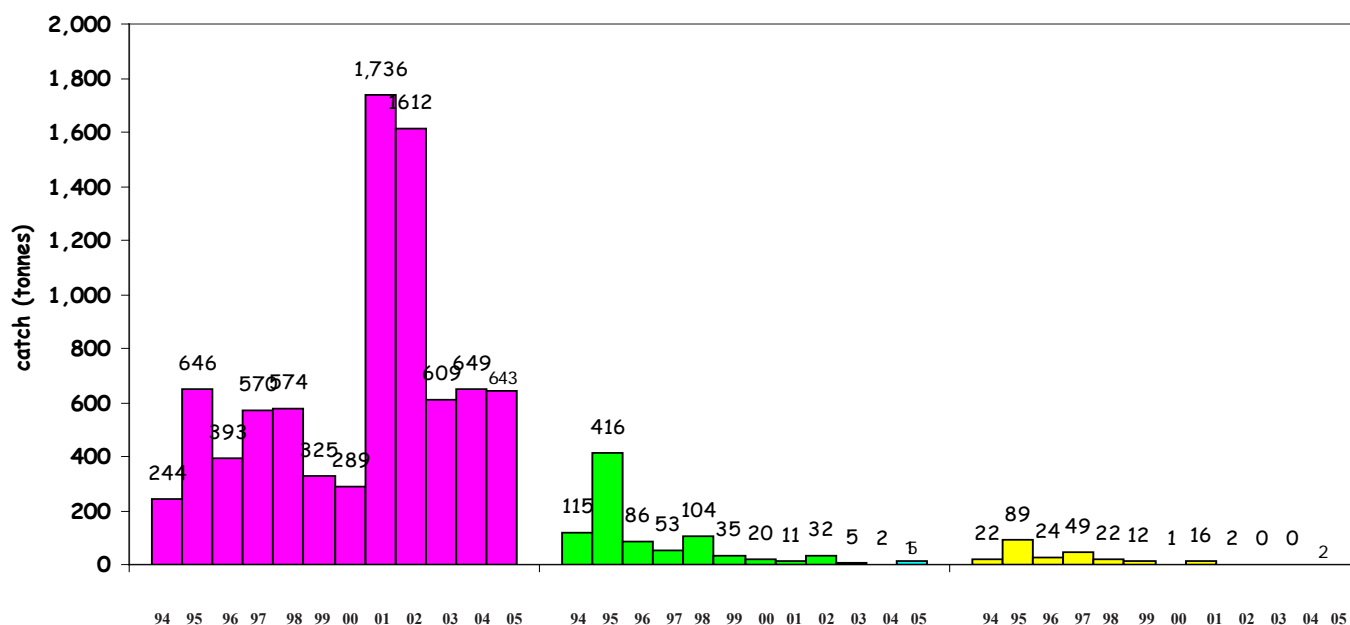


Figure 22a. Catch by species in the Bold area between 1994 and 2005

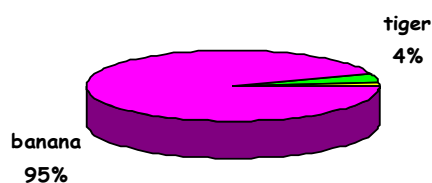


Figure 22b. Percentage catch by species in the Bold area in 2005

Source: AFMA logbook data



Banana fishery effort for the Bold area was up 6% to 417 days in 2005. Effort in the tiger fishery significantly increased from 15 days in 2004 to 79 days in 2005. (Figure 23a-c).

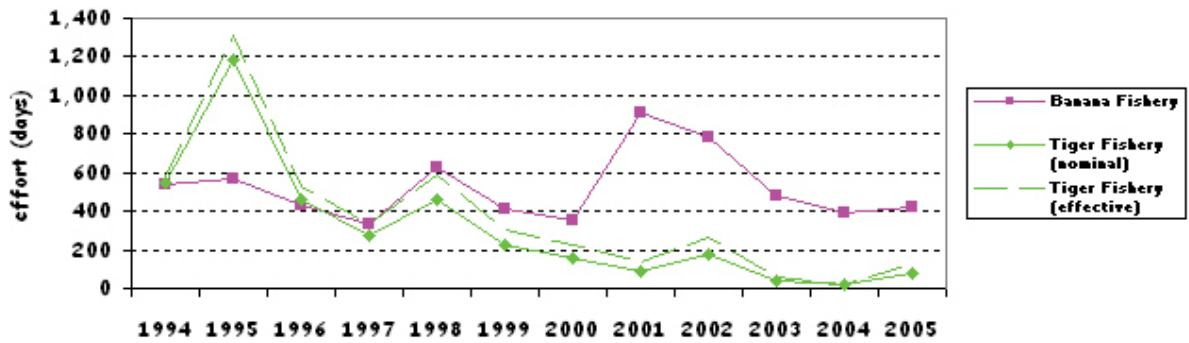


Figure 23a. Effort in the banana and tiger prawn fisheries in the Bold area between 1994 and 2005



Figure 23b. Catch rate in the banana prawn fishery in the Bold area between 1994 and 2005

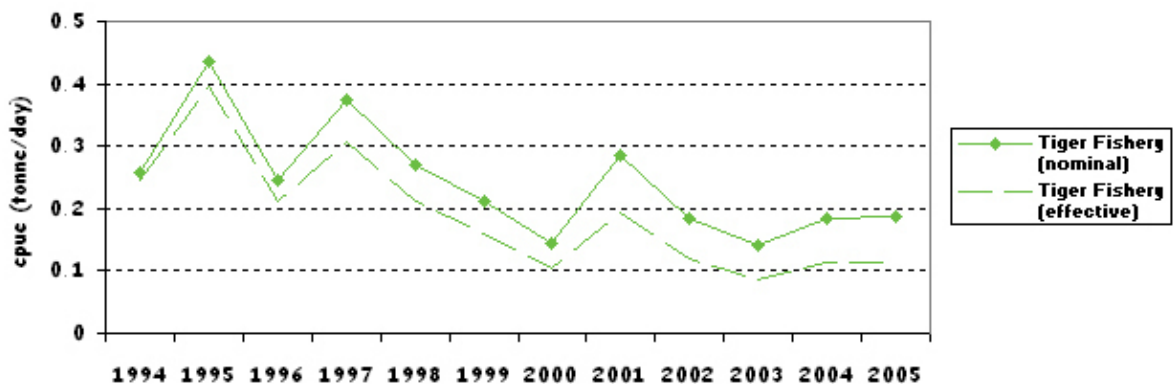


Figure 23c. Catch rate in the tiger prawn fisheries in the Bold area between 1994 and 2005

Source: AFMA logbook data



Sweers

The catch of banana prawns in the Sweers region increased to 146 tonnes in the 2005 season, up 15%. The catches of tiger and endeavour prawns were higher than 2004 (4 tonnes and 7 tonnes respectively (Figures 24a & 24b).

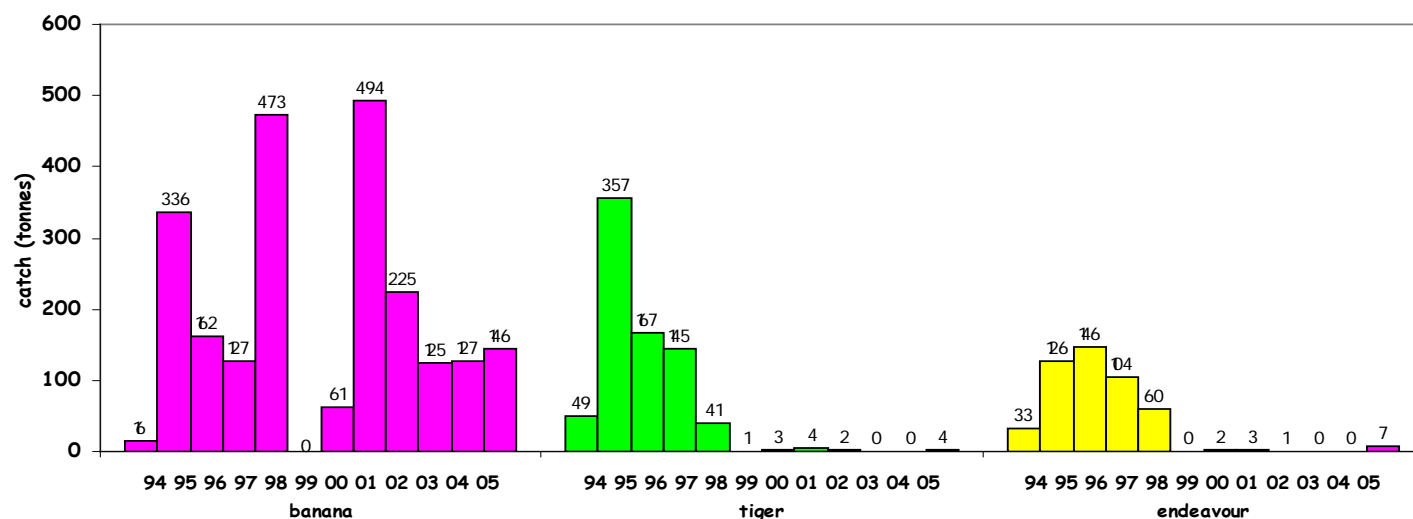


Figure 24a. Catch by species in the Sweers area between 1994 and 2005

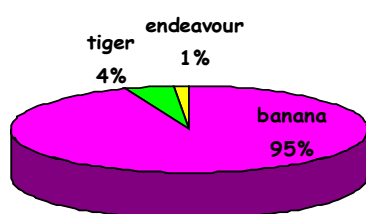


Figure 24b. Percentage catch by species in the Sweers area in 2005

Source: AFMA logbook data



Effort directed at the banana fishery in the Sweers area during the 2005 season decreased by 18% to 87 days. Effort in the tiger fishery increased to 65 days from 1 day in 2004 (Figure 25 a-c).

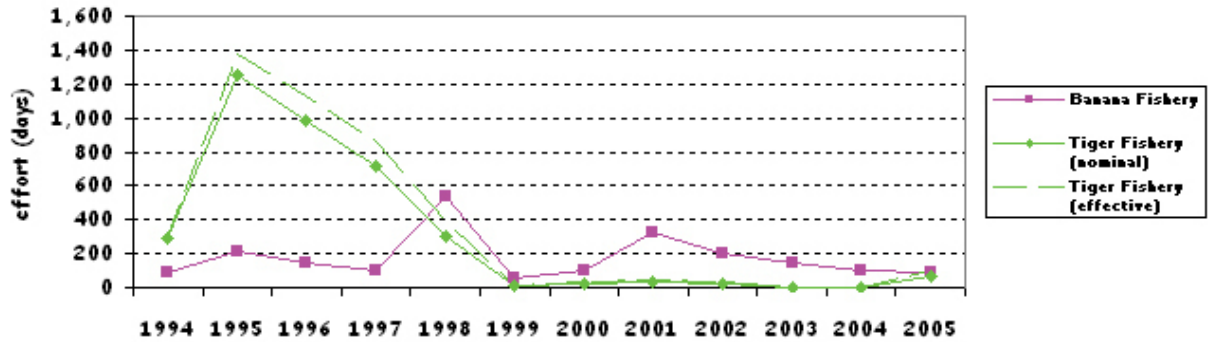


Figure 25a. Effort in the banana and tiger prawn fisheries in the Sweers area between 1994 and 2005

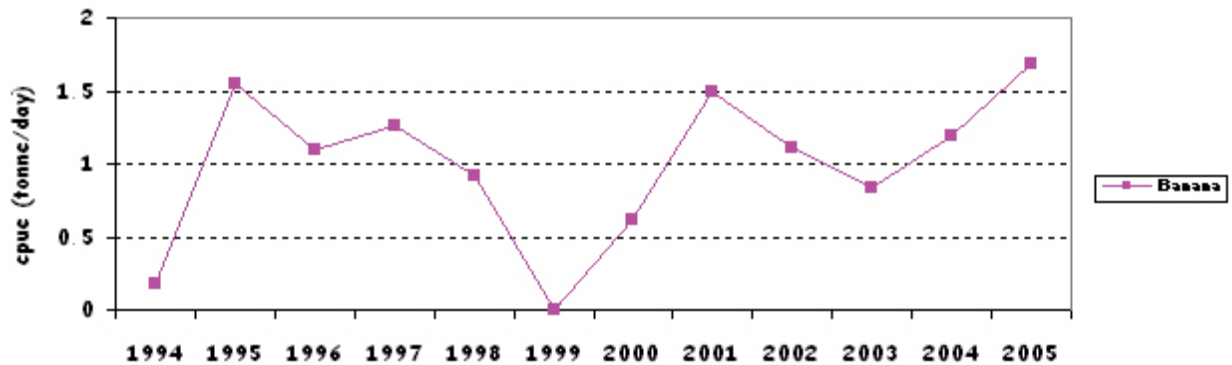


Figure 25b. Catch rate in the banana prawn fishery in the Sweers area between 1994 and 2005

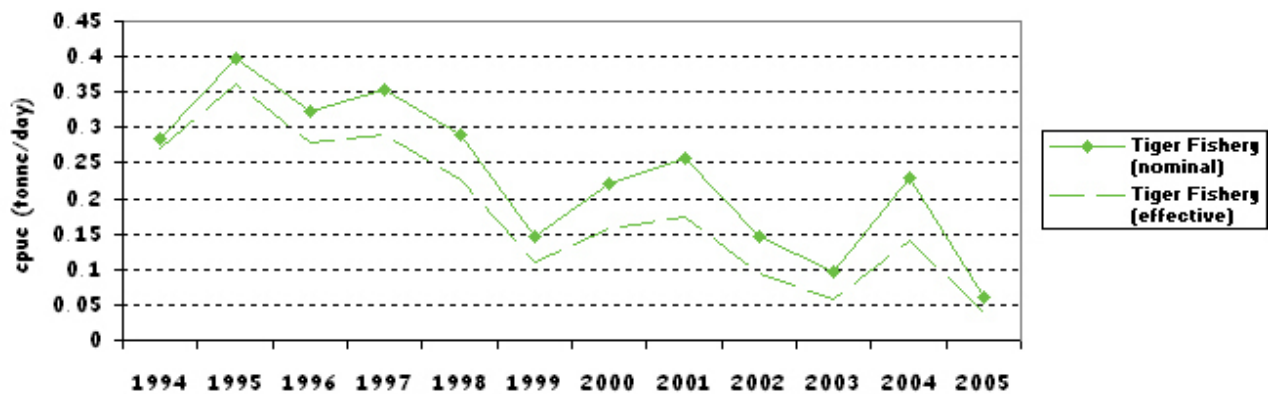


Figure 25c. Catch rate in the tiger prawn fisheries in the Sweers area between 1994 and 2005

Source: AFMA logbook data



Mornington

The 2005 banana prawn catch in the Mornington area increased to 91 tonnes, up from last season's catch of 37 tonnes. Tiger prawn catch increased significantly to 280 tonnes. Catches of endeavour prawns increased to 64 tonnes (Figures 26a & 26b).

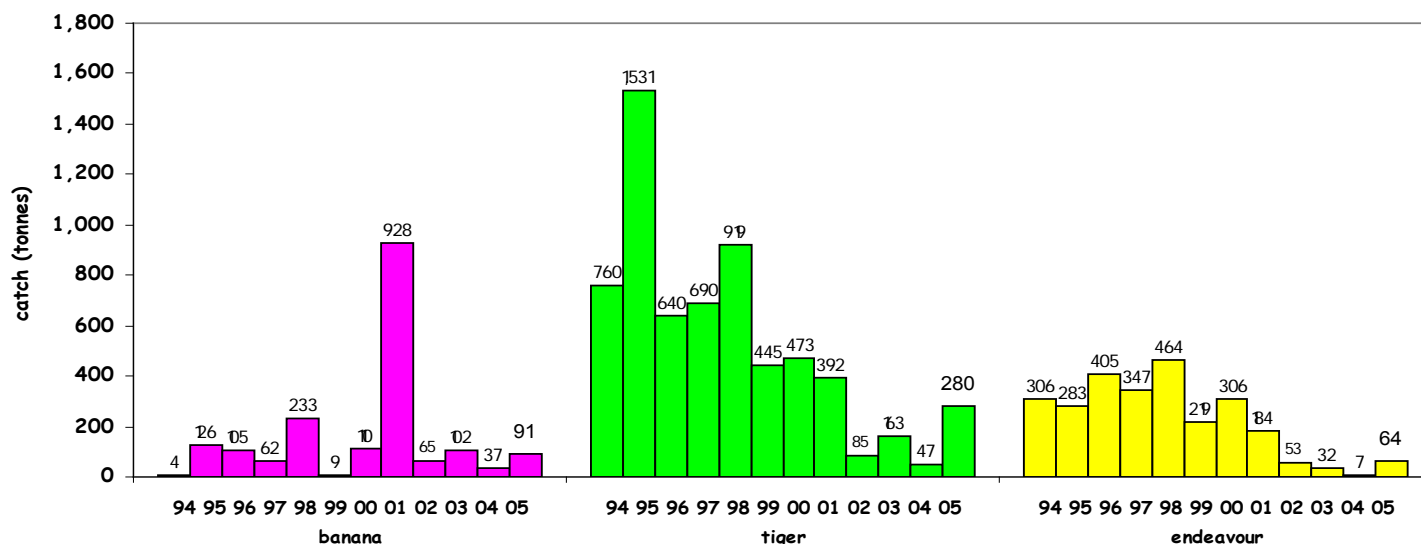


Figure 26a. Catch by species in the Mornington area between 1994 and 2005

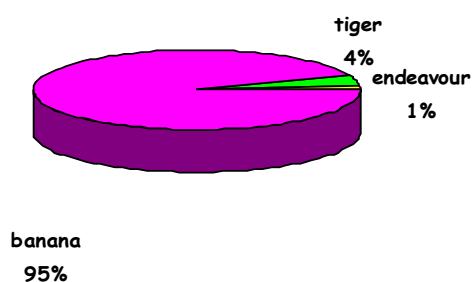


Figure 26b. Percentage catch by species in the Mornington area in 2005

Source: AFMA logbook data



Effort for the banana fishery in the Mornington area was up 38% to 113 days. Effort for the tiger fishery showed a very large increase of 1,281 days (Figure 27 a).

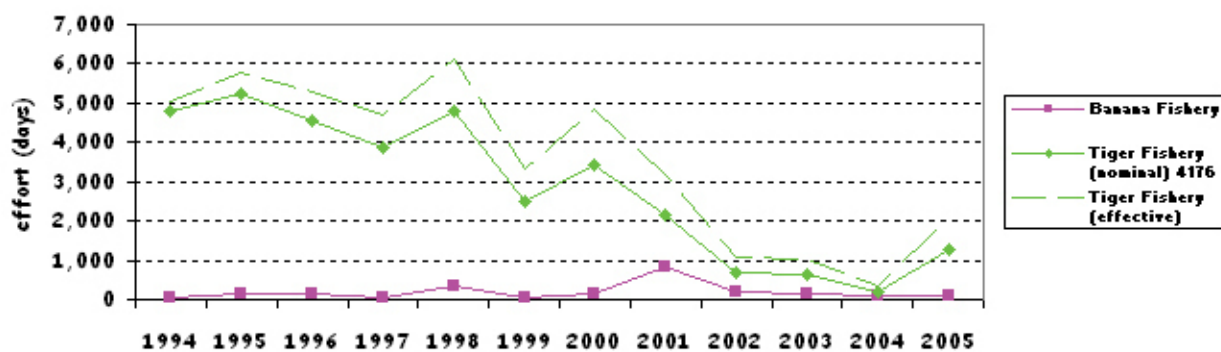


Figure 27a. Effort in the banana and tiger prawn fisheries in the Mornington area between 1994 and 2005

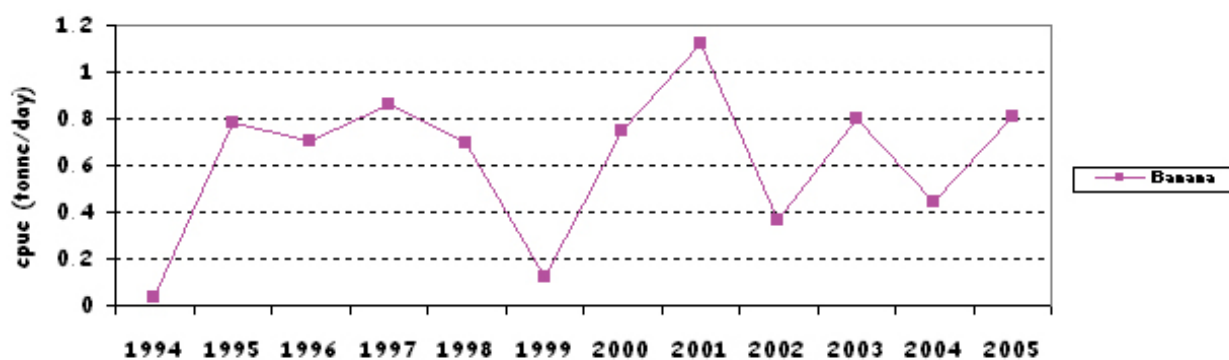


Figure 27b. Catch rate in the banana prawn fishery in the Mornington area between 1994 and 2005

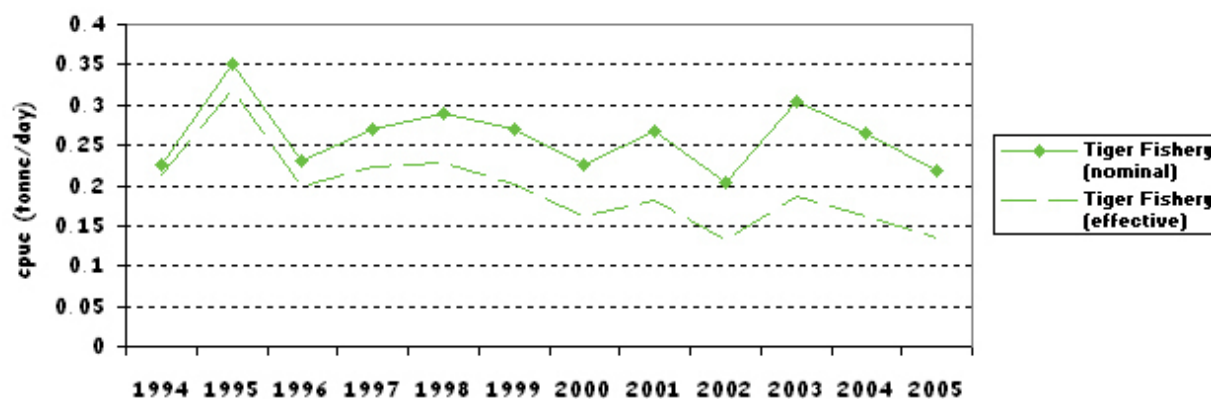


Figure 27c. Catch rate in the tiger prawn fisheries in the Mornington area between 1994 and 2005

Source: AFMA logbook data



Limmen Bight

The catch of banana prawns in the Limmen Bight area decreased by 95% from 2004 to 3 tonnes. Catches of both tiger and endeavour prawns also decreased, tigers to 509 tonnes and endeavours to 47 tonnes (Figures 28a & 28b).

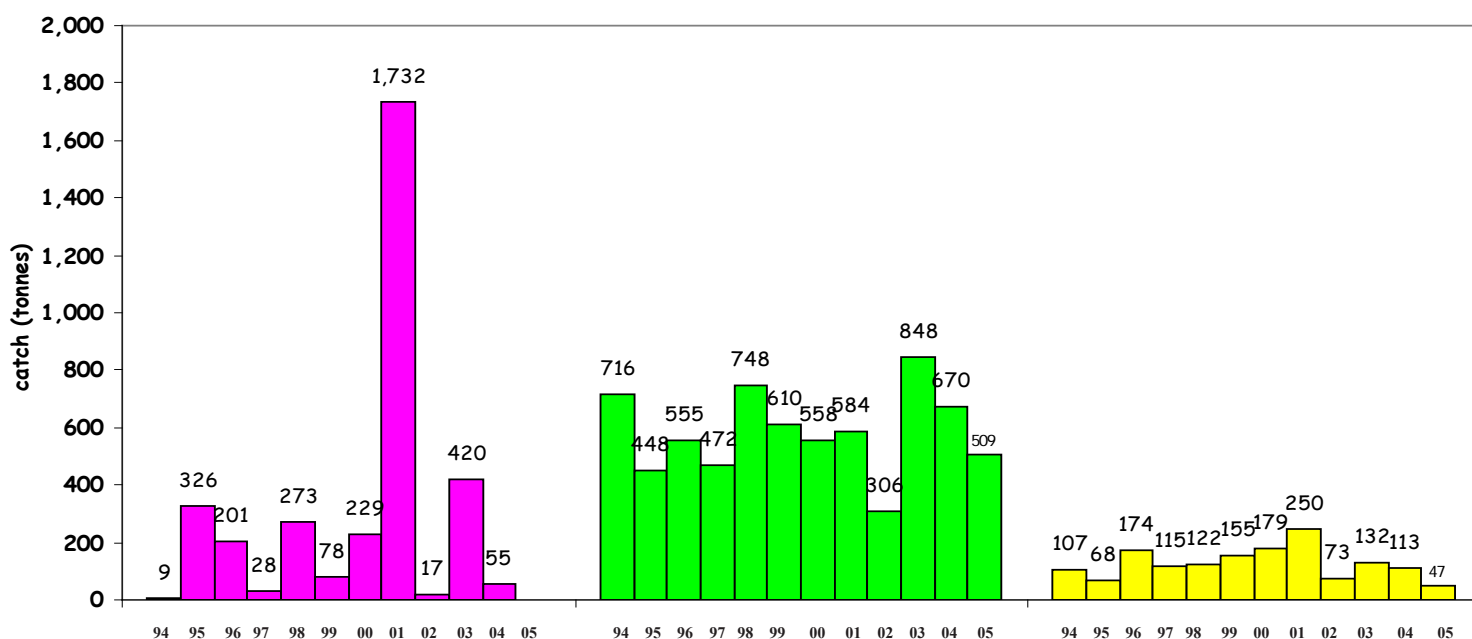


Figure 28a. Catch by species in the Limmen Bight area between 1994 and 2005

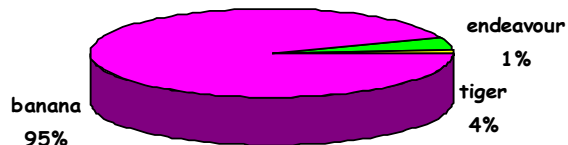


Figure 29b. Percentage catch by species in the Limmen Bight area in 2005

Source: AFMA logbook data



Effort for the banana fishery in the Limmen Bight area decreased by 86% to 25 days. The tiger fishery effort also decreased to 2103 days, which was 19% lower than in 2004 (Figure 29 a-c).

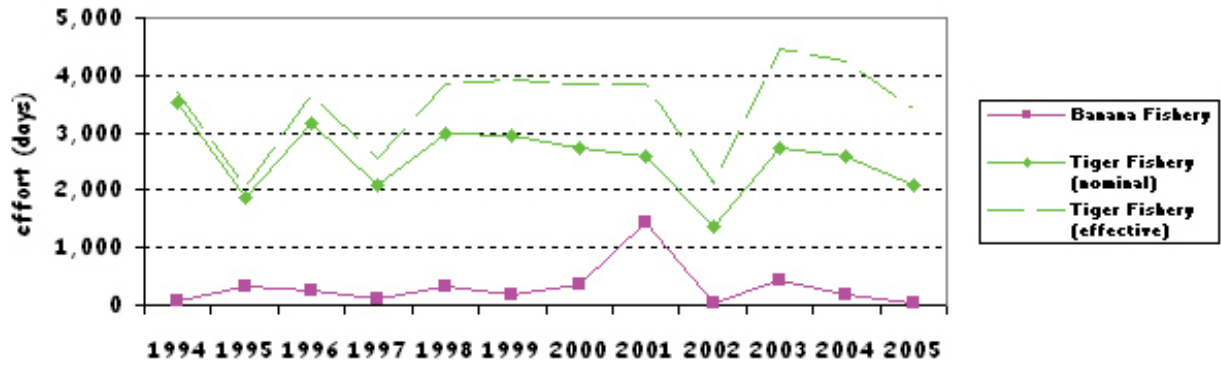


Figure 29a. Effort in the banana and tiger prawn fisheries in the Limmen Bight area between 1994 and 2005



Figure 29b. Catch rate in the banana prawn fishery in the Limmen Bight area between 1994 and 2005

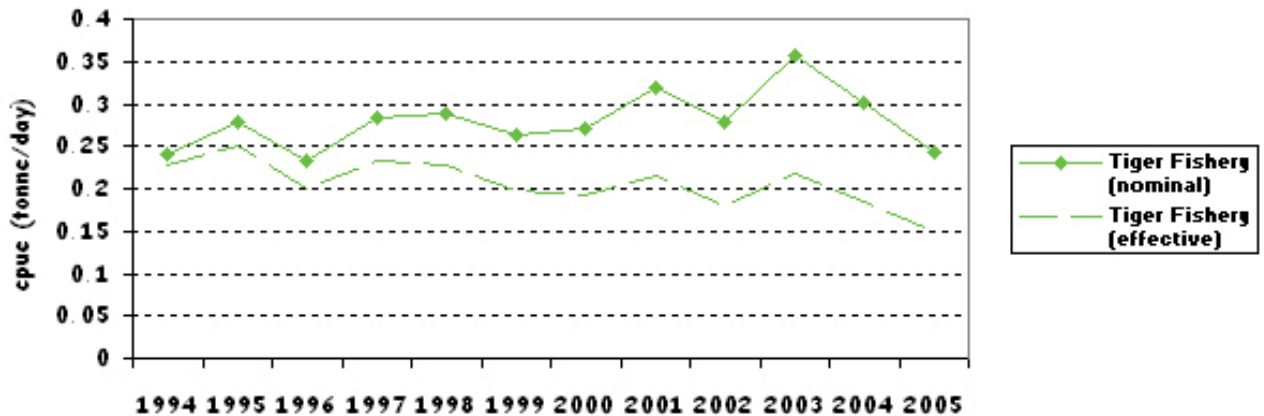


Figure 29c. Catch rate in the tiger prawn fisheries in the Limmen Bight area between 1994 and 2005
Source: AFMA logbook data



Groote

Banana prawn catches decreased to 3 tonnes in the Groote area in 2005 (from 111 in 2004). Groote had the largest catch of tiger prawns in 2005 with 576 tonnes, (slightly less than the 699 tonnes recorded for 2004). Endeavour prawn catches decreased by 50% to 95 tonnes (Figures 30a & 30b).

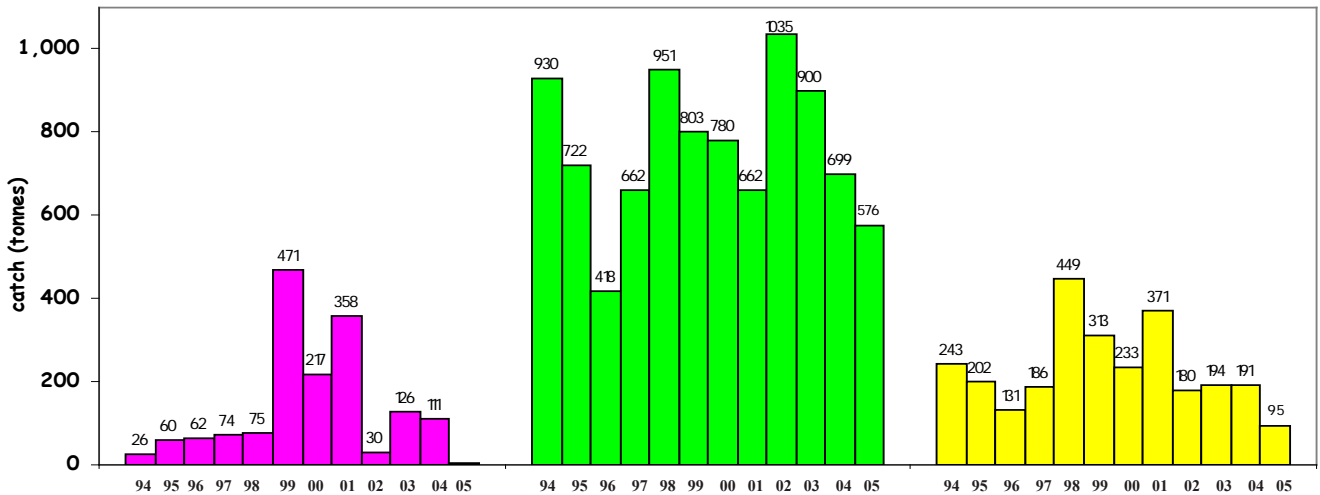


Figure 30a. Catch by species in the Groote area between 1994 and 2005

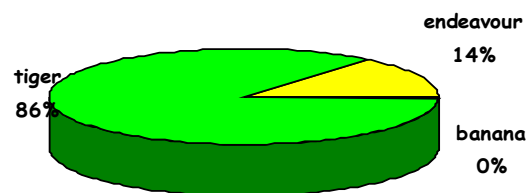


Figure 30b. Percentage catch by species in the Groote area in 2005

Source: AFMA logbook data



Effort in the banana fishery for the Groote area decreased by 88% to 25 days in 2005. Effort for the tiger fishery was 2811 days, a 16% reduction on the 3363 days of effort during 2004. (Figure 31 a-c).

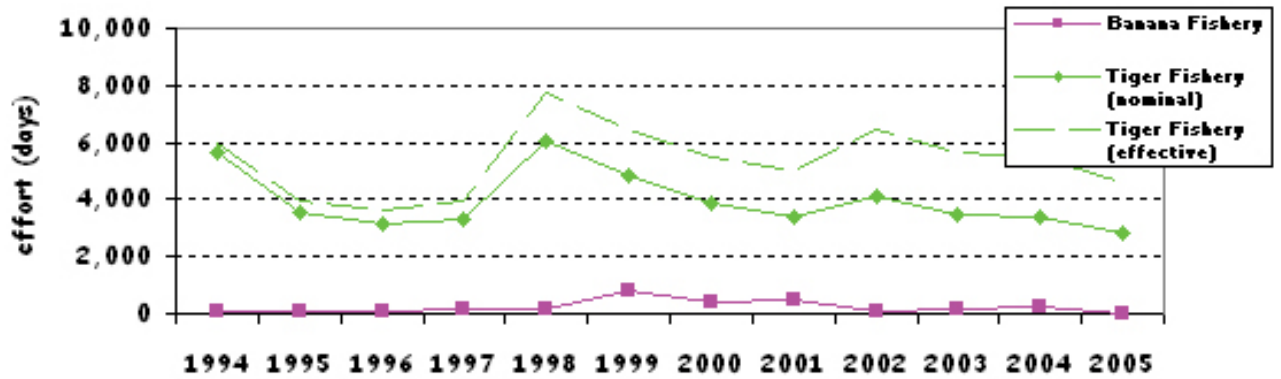


Figure 31a. Effort in the banana and tiger prawn fisheries in the Groote area between 1994 and 2005

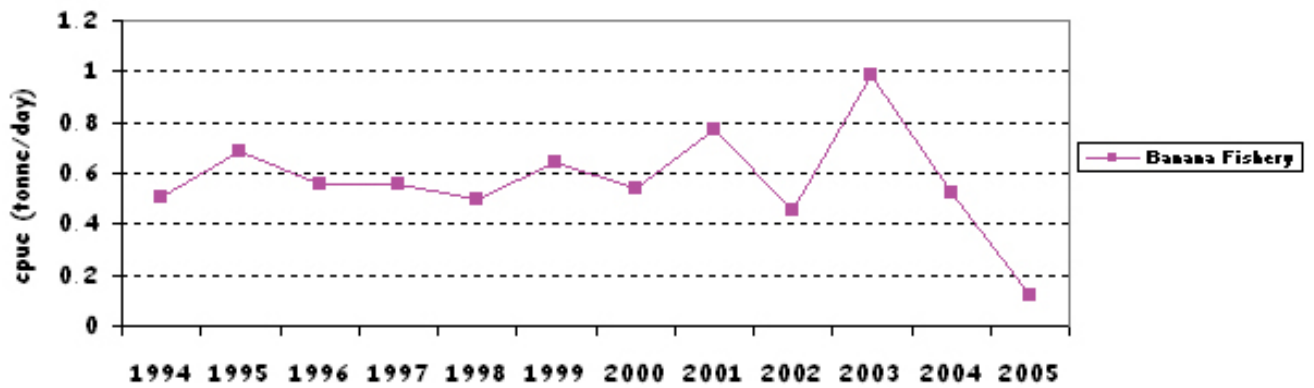


Figure 31b. Catch rate in the banana prawn fishery in the Groote area between 1994 and 2005

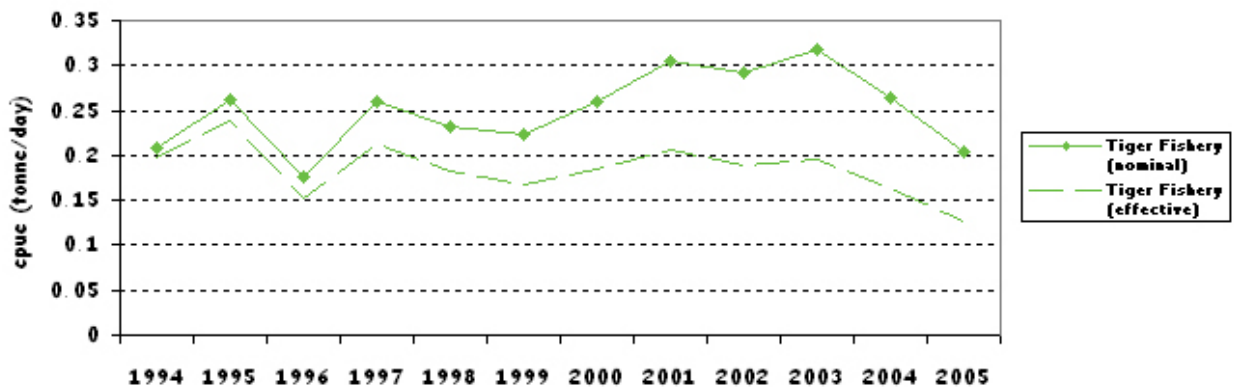


Figure 31c. Catch rate in the tiger prawn fisheries in the Groote area between 1994 and 2005

Source: AFMA logbook data



Gove

Both Banana and Tiger prawn catch increased by 2% in the 2005 season to 72 tonnes and 288 tonnes respectively. Endeavor catch was also slightly lower at 39 tonnes (Figures 32a & 32b).

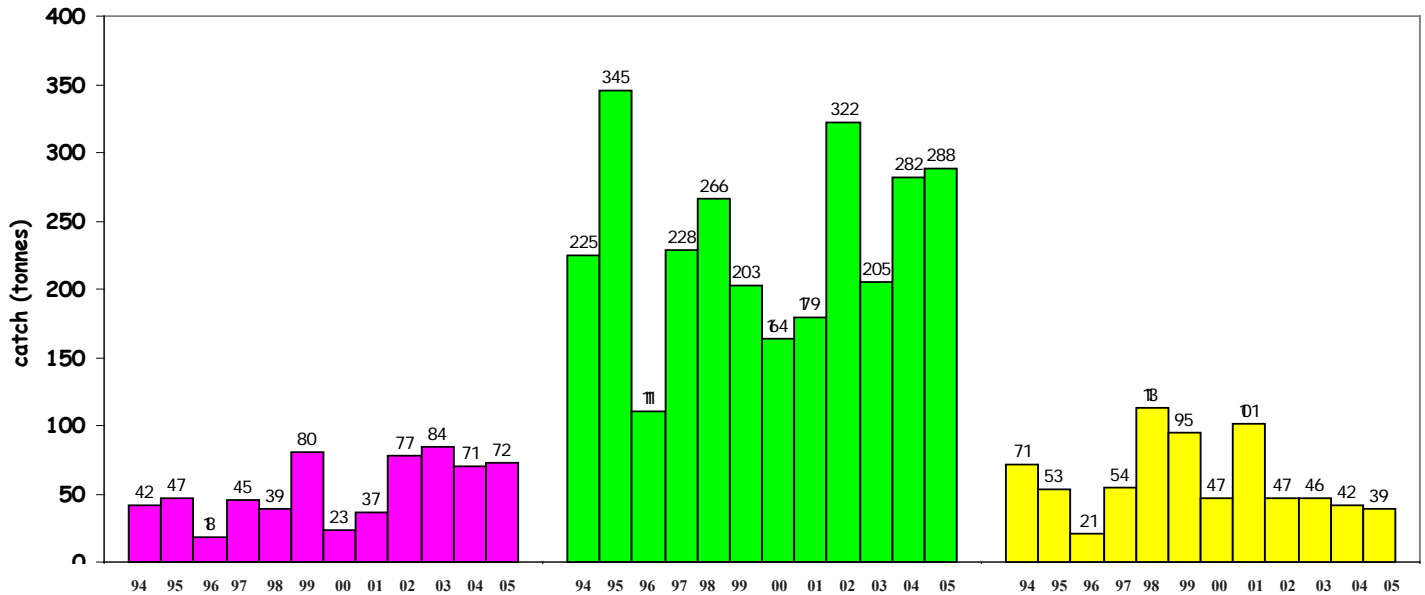


Figure 32a. Catch by species in the Gove area between 1994 and 2005

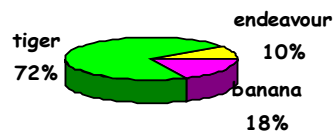


Figure 32b. Percentage catch by species in the Gove area in 2005

Source: AFMA logbook data



Effort for the Gove area decreased by 10% in the Banana fishery (145 days) but increased by 11% in the Tiger fishery (1370 days) (Figure 33 a-c).



Figure 33a. Effort in the banana and tiger prawn fisheries in the Gove area between 1994 and 2005

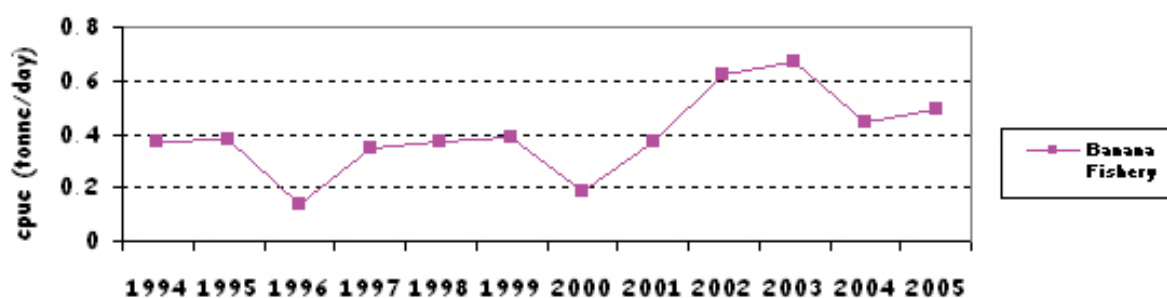


Figure 33b. Catch rate in the banana prawn fishery in the Gove area between 1994 and 2005

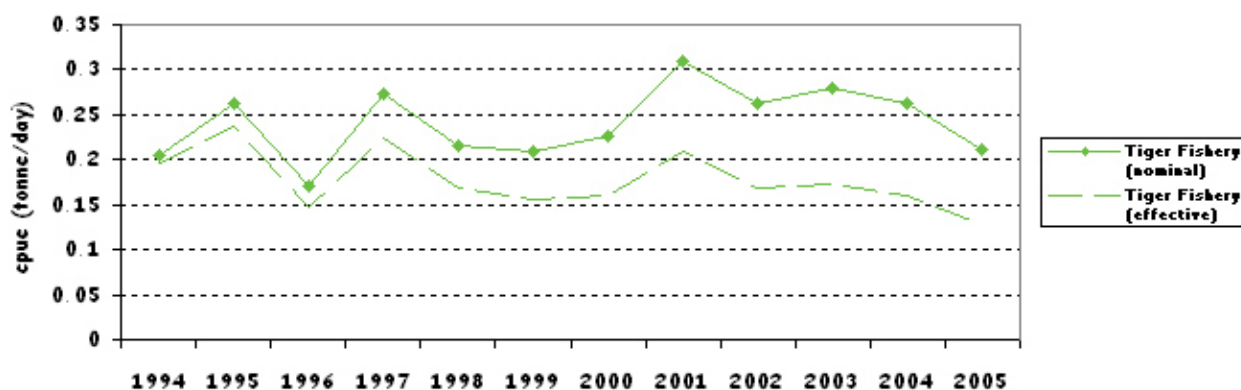


Figure 33c. Catch rate in the tiger prawn fisheries in the Gove area between 1994 and 2005

Source: AFMA logbook data



Arnhem

Banana prawn catch decreased by 57% to 112 tonnes in the 2005 season and the catch of tiger prawns increased to 15 tonnes. The catch of endeavour prawns remained low, at less than half a tonne (Figures 34a & 34b).

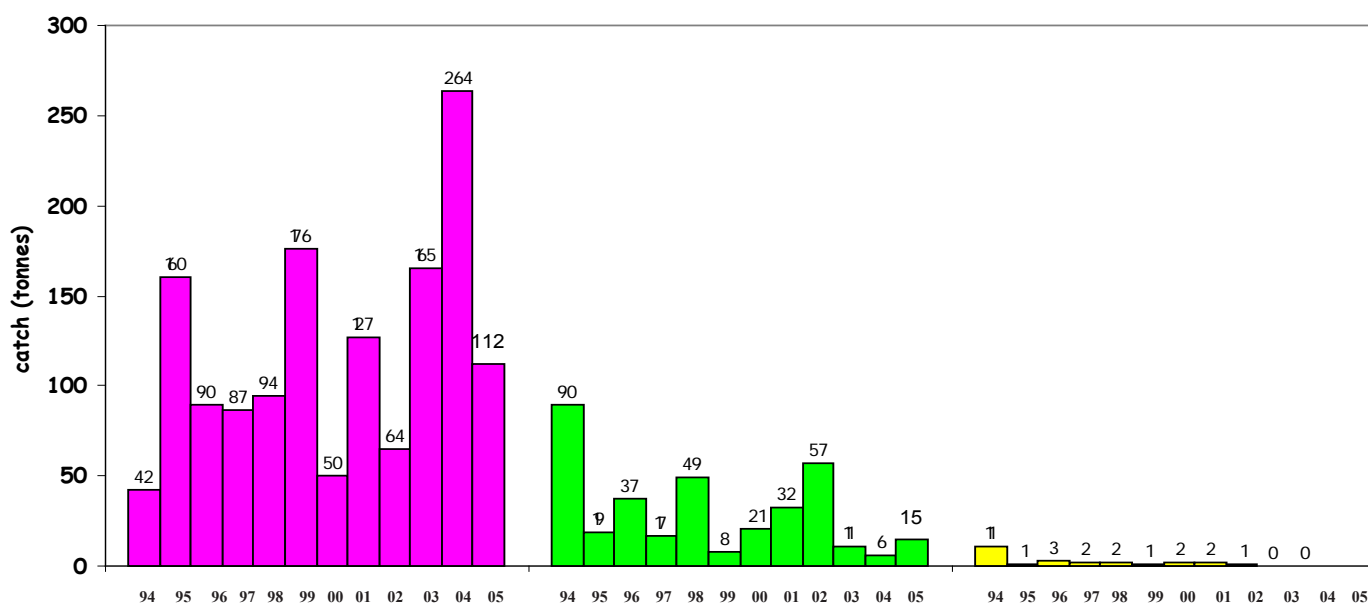


Figure 34a. Catch by species in the Arnhem area between 1994 and 2005

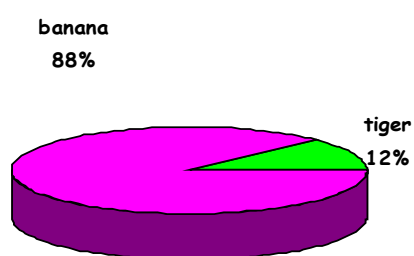


Figure 34b. Percentage catch by species in the Arnhem area in 2005

Source: AFMA logbook data



Effort for the Arnhem area fell by 39% to 186 days for the banana fishery and increased by 79% to 70 days for the tiger fishery (Figure 35 a-c).



Figure 35a. Catch rate in the banana prawn fishery in the Arnhem area between 1994 and 2005



Figure 35b. Catch rate in the banana prawn fishery in the Arnhem area between 1994 and 2005

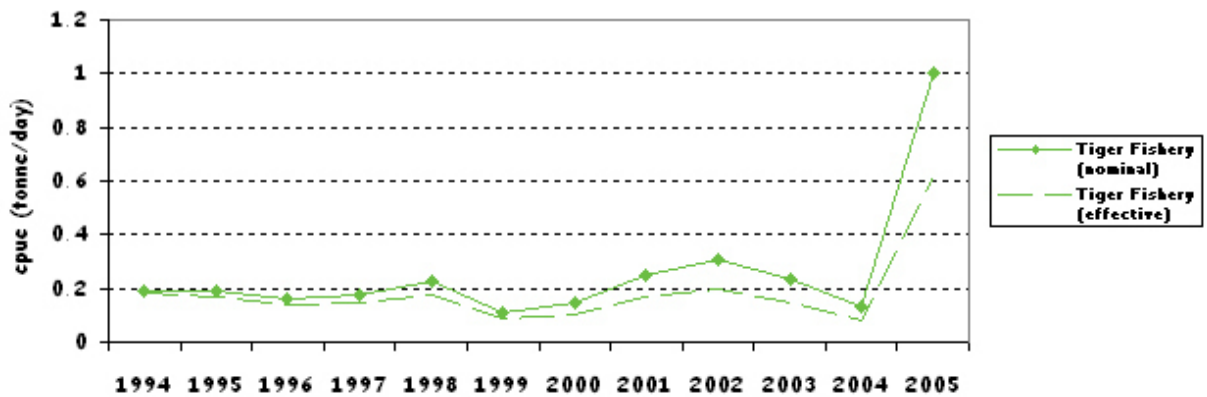


Figure 35c. Catch rate in the tiger prawn fisheries in the Arnhem area between 1994 and 2005
Source: AFMA logbook data



Port Essington

Catches of banana prawns increased in the Port Essington area for the 2005 season by 23% to 236 tonnes. The catch of tiger prawns dropped by 9% to 15 tonnes. Endeavour and king prawn catches were virtually consistent with 2004 (Figures 36a & 36b).

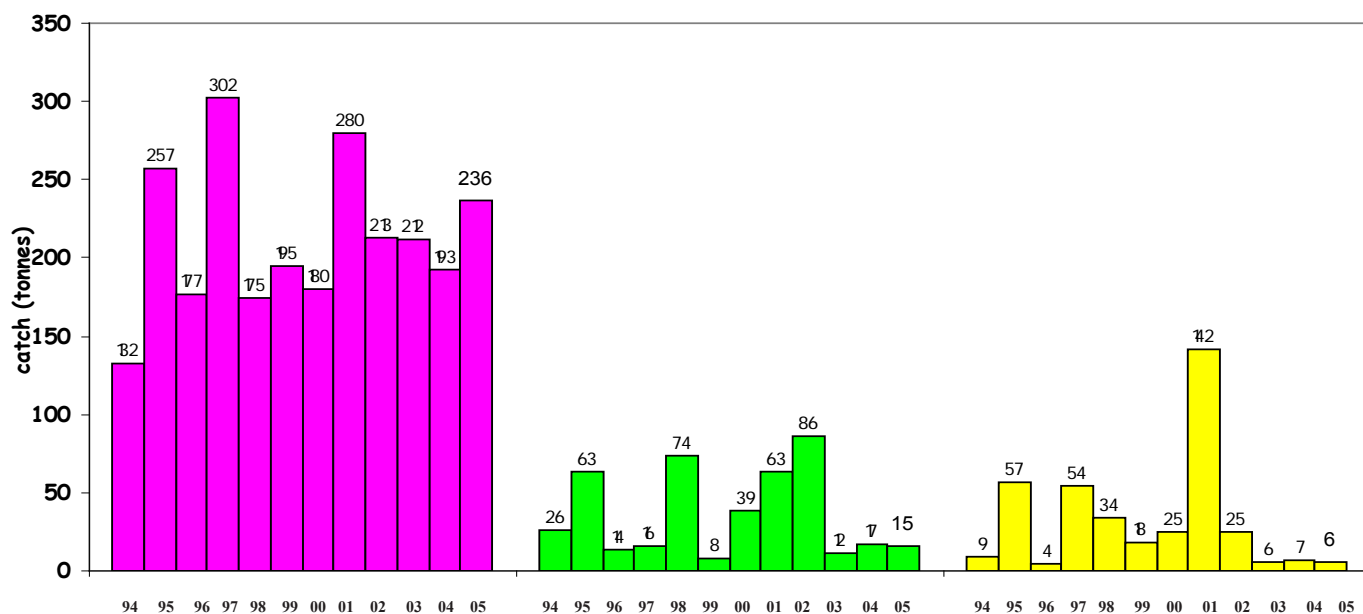


Figure 36a. Catch by species in the Port Essington area between 1994 and 2005

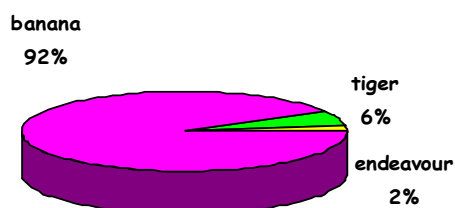


Figure 36b. Percentage catch by species in the Port Essington area in 2005

Source: AFMA logbook data



Effort in the banana fishery increased by 67% to 403 days, while the tiger fishery effort fell by 49% to 47 days (Figure 37 a-c).

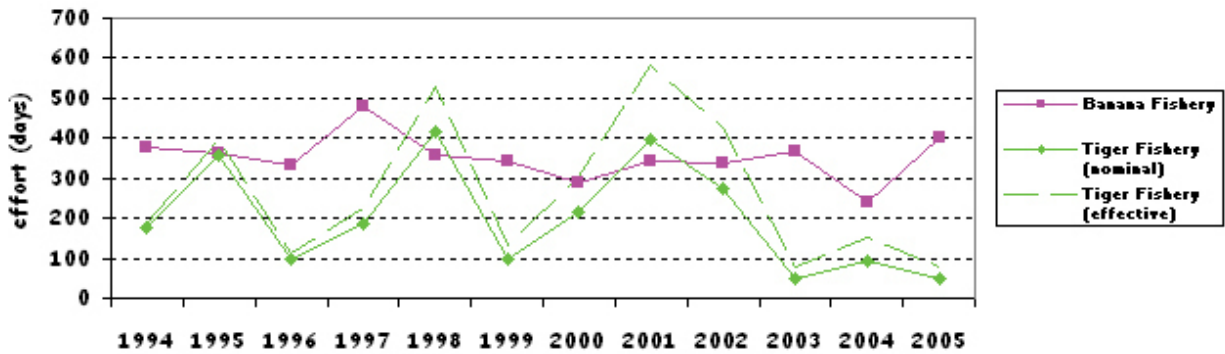


Figure 37a. Effort in the banana and tiger prawn fisheries in the Port Essington area between 1994 and 2005



Figure 37b. Catch rate in the banana prawn fishery in the Port Essington area between 1994 and 2005

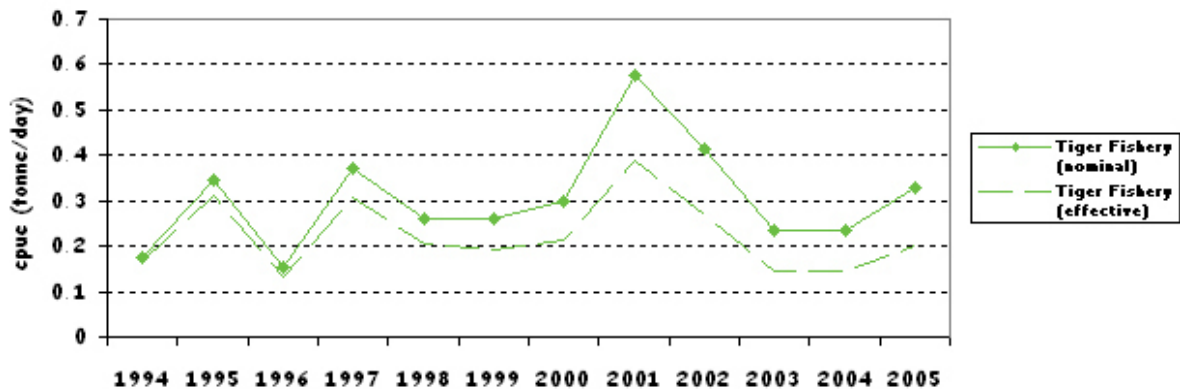


Figure 37c. Catch rate in the tiger prawn fisheries in the Port Essington area between 1994 and 2005
Source: AFMA logbook data



Melville

The banana prawn catch in the Melville area dropped by 33% to 306 tonnes. Catches of both tiger and endeavour prawns remained unchanged at less than 100 kilograms in

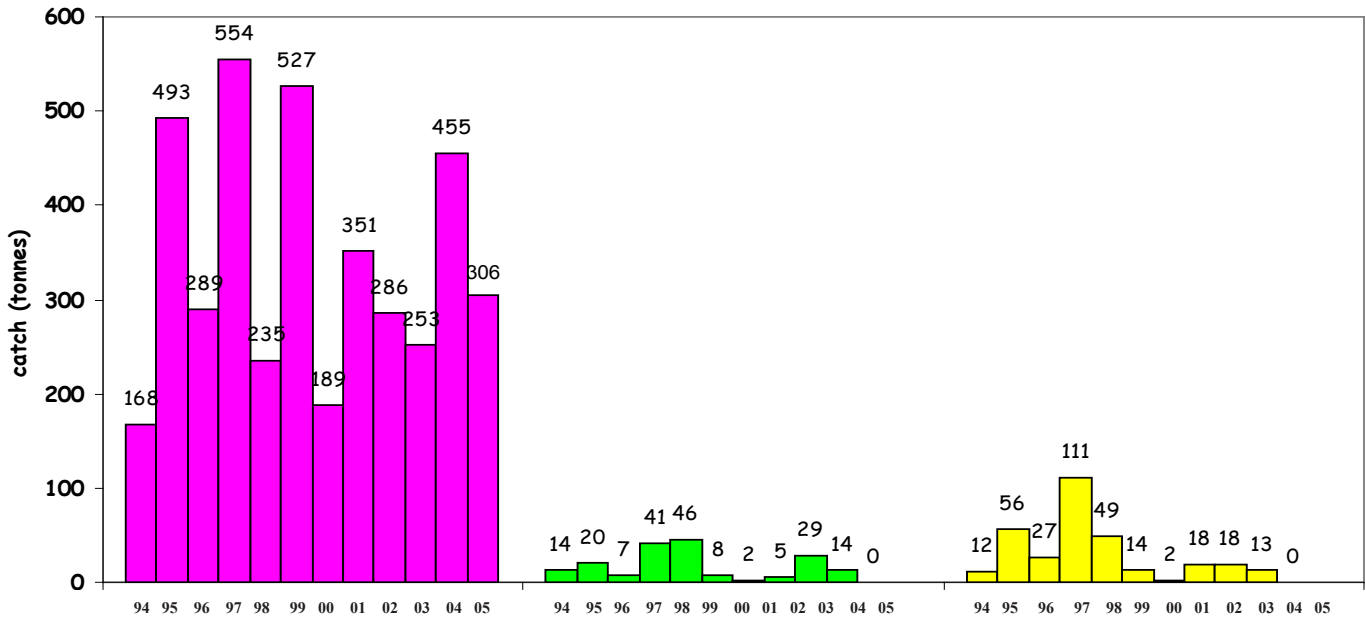


Figure 38a. Catch by species in the Melville area between 1994 and 2005

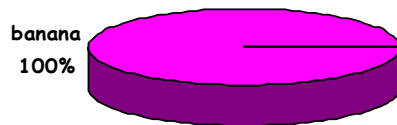


Figure 38b. Percentage catch by species in the Melville area in 2005

Source: AFMA logbook data



Effort increased by 30 days to 530 days in the banana fishery. Tiger fishery effort rose to 44 days in 2005 (Figure 39 a-c).

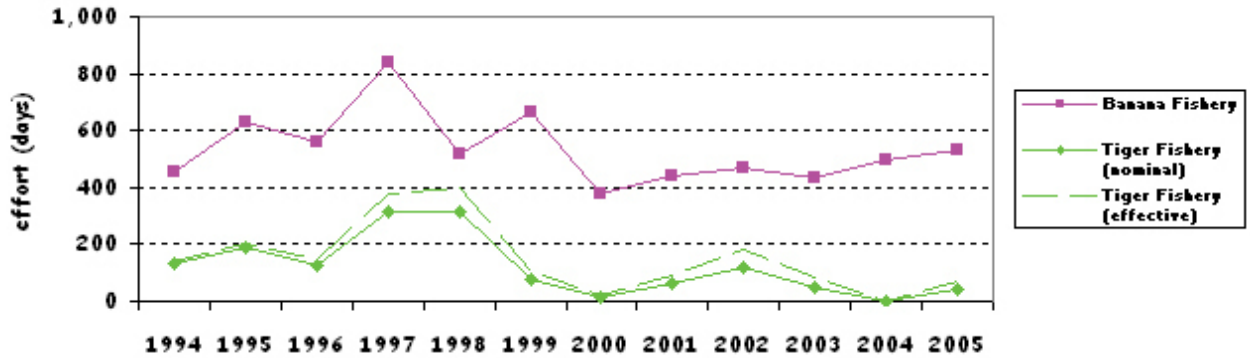


Figure 39a. Effort in the banana and tiger prawn fisheries in the Melville area between 1994 and 2005

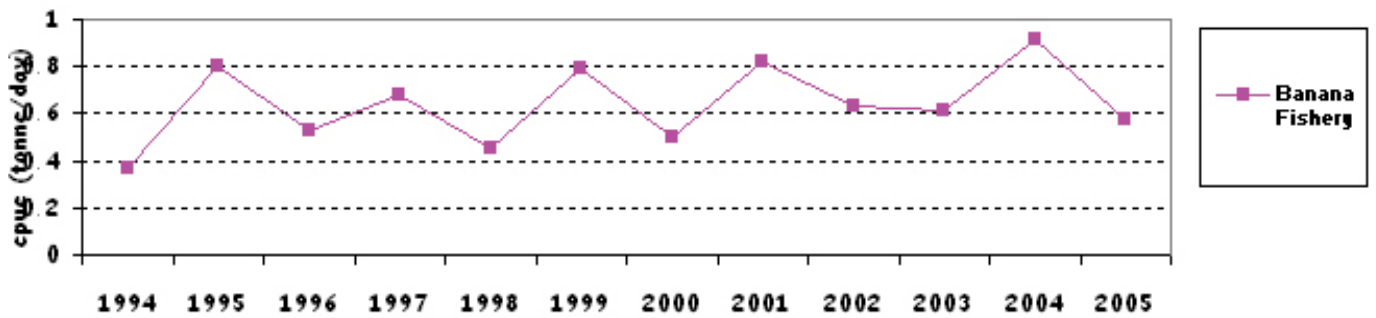


Figure 39b. Catch rate in the banana prawn fishery in the Melville area between 1994 and 2005

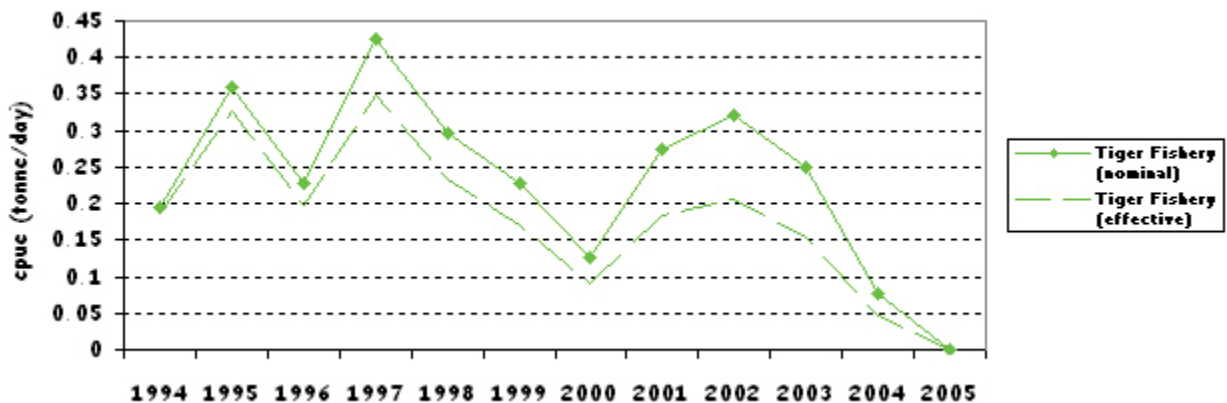


Figure 39c. Catch rate in the tiger prawn fisheries in the Mellville area between 1994 and 2005

Source: AFMA logbook data



Fog Bay

The banana prawn catch in the Fog Bay area fell by 63% to 123 tonnes in 2005. Catches of tiger and endeavour prawns remained very low (Figures 40a & 40b).

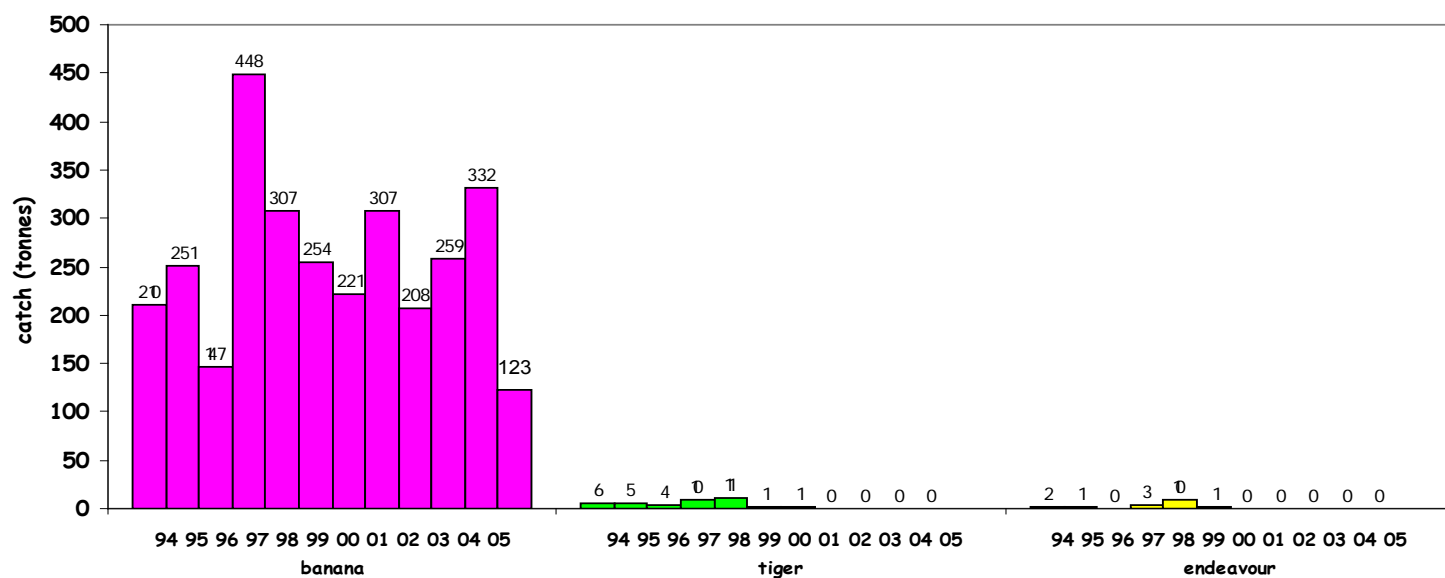


Figure 40a. Catch by species in the Fog Bay area between 1994 and 2005

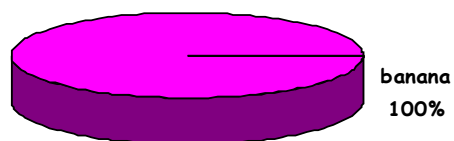


Figure 40b. Percentage catch by species in the Fog Bay area in 2005

Source: AFMA logbook data



Effort for the banana fishery in the Fog Bay area during 2005 was down 31% to 181 days. Effort for the tiger fishery remained very low (Figure 41 a-c).



Figure 41a. Effort in the banana and tiger prawn fisheries in the Fog Bay area between 1994 and 2005

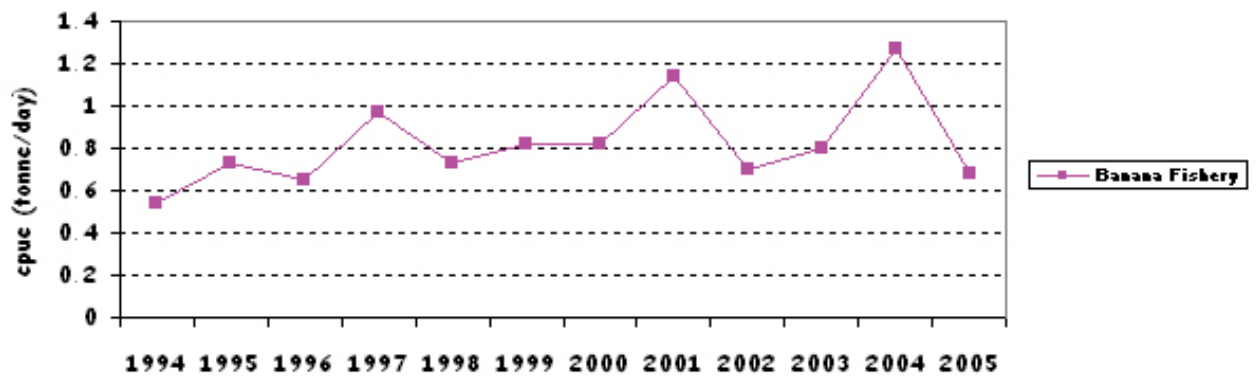


Figure 41b. Catch rate in the banana prawn fishery in the Fog Bay area between 1994 and 2005

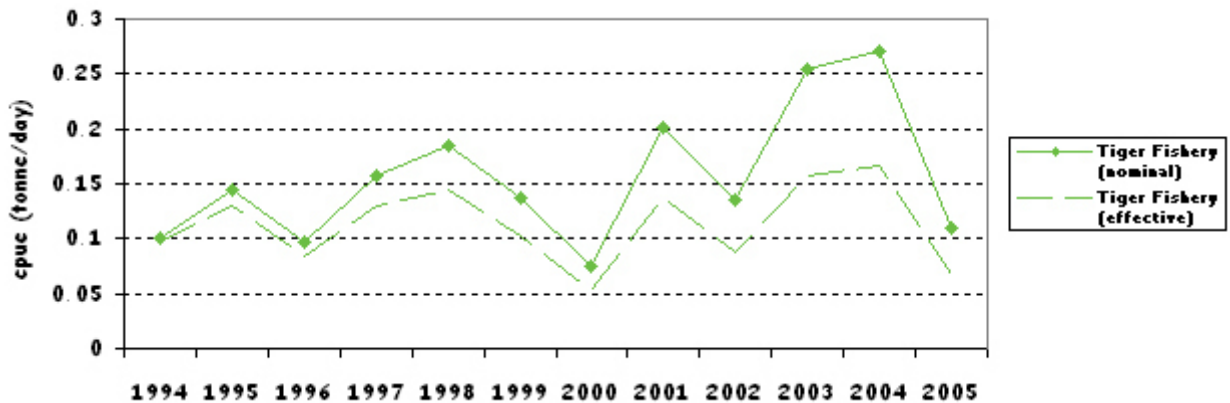


Figure 41c. Catch rate in the tiger prawn fishery in the Fog Bay area between 1994 and 2005
Source: AFMA logbook data



Bonaparte

The banana prawn catch in the Bonaparte area fell by 33% to 318 tonnes. Tiger prawn catch fell by 55% to 15 tonnes and catch of Endeavour prawns decreased by 88% to just 5 tonnes (Figures 42a & 42b).

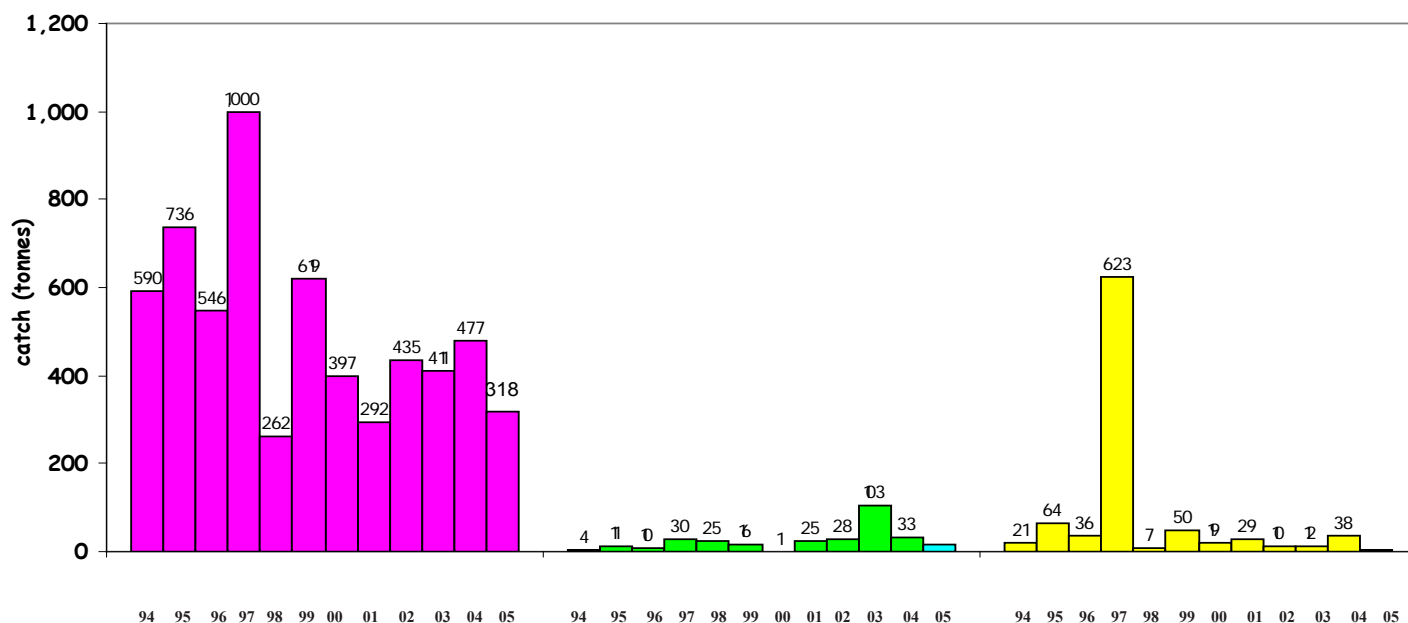


Figure 42a. Catch by species in the Bonaparte area between 1994 and 2005

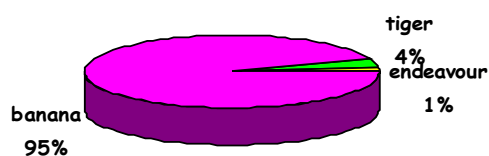


Figure 42b. Percentage catch by species in the Bonaparte area in 2005

Source: AFMA logbook data



Effort in the Banana fishery decreased by 38% to 445 days and in the Tiger fishery by 68% to 64 days in 2005 (Figure 43 a-c).



Figure 43a. Effort in the banana and tiger prawn fisheries in the Bonaparte area between 1994 and 2005

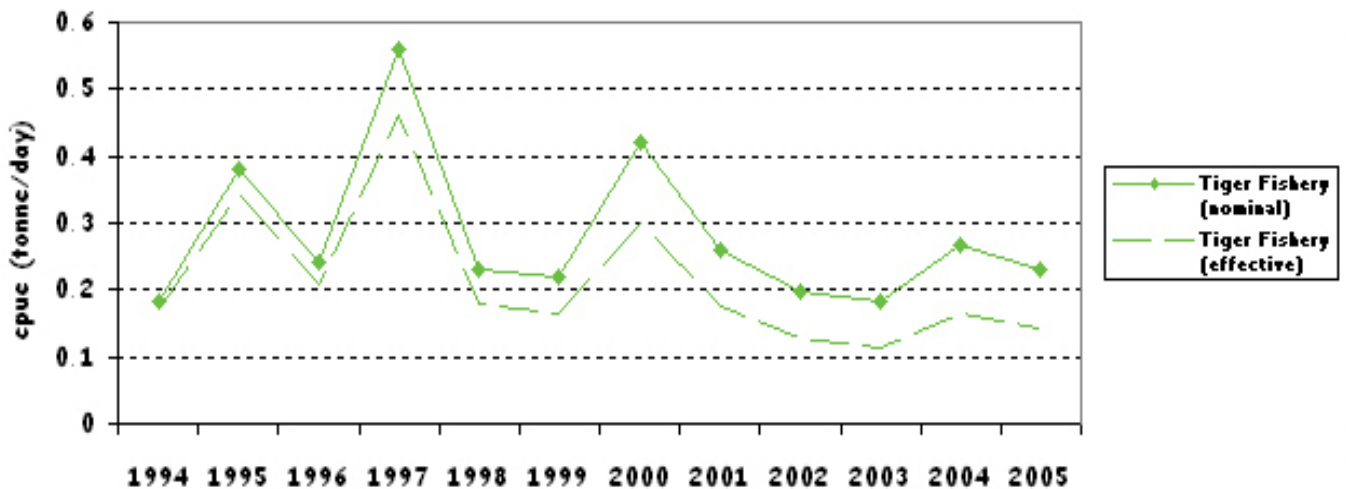


Figure 43c. Catch rate in the tiger prawn fisheries in the Bonaparte area between 1994 and 2005

Source: AFMA logbook data



Bycatch in the Northern Prawn Fishery

Turtle Bycatch

Turtle bycatch (and prawn nominal effort) by area is shown in Figures 44a and 44b and Table 5. Reported turtle catch by species is shown in Figure 45. Overall, total reported turtle interactions remained steady when compared with the 2004 season (Table 5).

Note - The implementation of Turtle Exclusion Devices (TEDs) on all NPF vessels has been mandatory since 15 April 2000. Also, no interactions with Leatherback Turtles have been recorded since 2001.

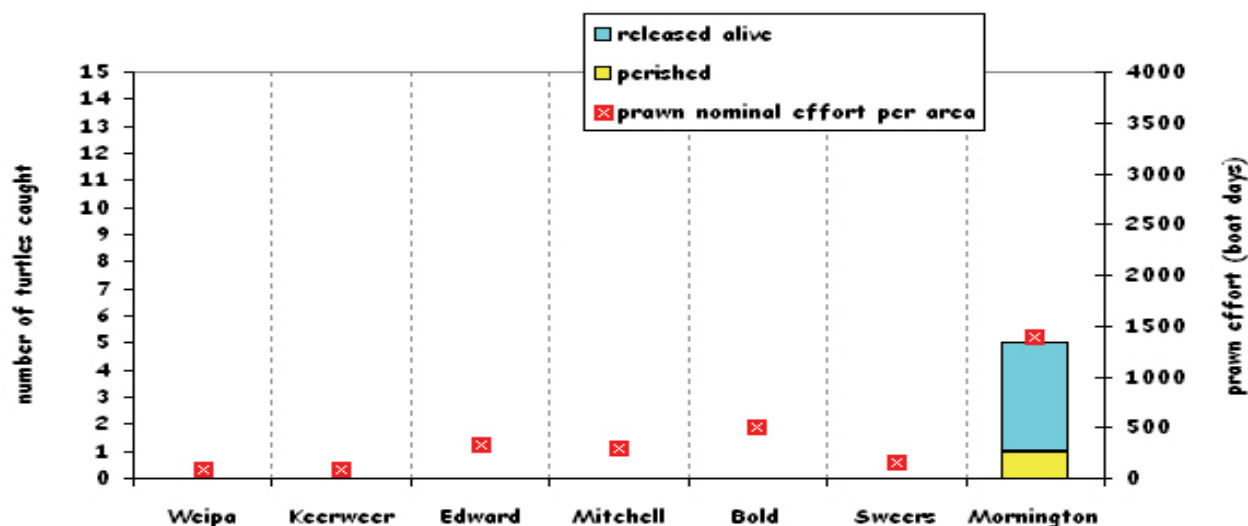


Figure 44a. Turtle Bycatch in the Northern Prawn Fishery by Statistical Area (Weipa - Mornington) in 2005

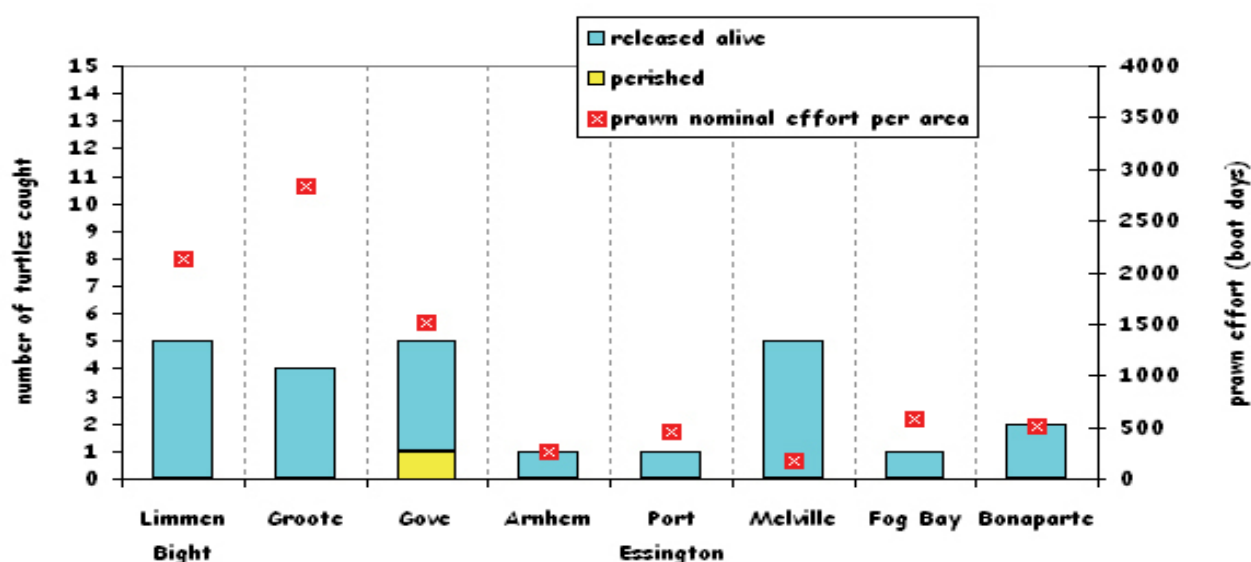


Figure 44b. Turtle Bycatch in the Northern Prawn Fishing by Statistical Area (Limmen - Bonaparte) in 2005

Source: AFMA logbook data



Table 5. Turtle Bycatch by Species in each Statistical Area, 2003-2005 (continued on next page)

Source: AFMA logbook data

Statistical Area	Turtle Species	Released alive			Perished			Condition unknown		
		03	04	05	03	04	05	03	04	05
WEIPA	<i>Flatback</i>									
	<i>Green</i>									
	<i>Loggerhead</i>									
	<i>Pacific Ridley</i>									
KEERWEER	<i>Unidentified species</i>									
MITCHELL	<i>Flatback</i>		1							
	<i>Flatback</i>	1								
	<i>Green</i>									
	<i>Loggerhead</i>									
BOLD	<i>Unidentified species</i>									
	<i>Flatback</i>	1								
	<i>Green</i>									
	<i>Hawksbill</i>									
SWEERS	<i>Loggerhead</i>									
	<i>Leatherback</i>									
	<i>Pacific Ridley</i>	1								
	<i>Unidentified species</i>									
MORNINGTON	<i>Flatback</i>									
	<i>Green</i>									
	<i>Hawksbill</i>						1			1
	<i>Flatback</i>		1	1						
LIMMEN BIGHT	<i>Green</i>			2						
	<i>Pacific Ridley</i>			1						
	<i>Flatback</i>		1	1						
	<i>Green</i>	4		2						
GROOTE	<i>Hawksbill</i>									
	<i>Leatherback</i>									
	<i>Loggerhead</i>		1	1						
	<i>Pacific Ridley</i>	1		1						
GOVE	<i>Unidentified species</i>	1								
	<i>Flatback</i>	1	5					1		
	<i>Green</i>	3	3	4						
	<i>Hawksbill</i>		2							
ARNHEM	<i>Loggerhead</i>									
	<i>Pacific Ridley</i>	1	4							
	<i>Unidentified species</i>	1								
	<i>Flatback</i>	1								
PORT ESSINGTON	<i>Green</i>									
	<i>Pacific Ridley</i>									
	<i>Unidentified species</i>	2								
	<i>Pacific Ridley</i>			1						
GOVE	<i>Flatback</i>	5	1	2			1			1
	<i>Green</i>	1		2						
	<i>Pacific Ridley</i>					1				
	<i>unidentified species</i>	2								
ARNHEM	<i>Pacific Ridley</i>			1						
	<i>Green</i>									
PORT ESSINGTON	<i>Flatback</i>									
	<i>Green</i>			1						
	<i>Pacific Ridley</i>					1				



Statistical Area	Turtle Species	Released Alive			Perished			Condition Unknown		
		03	04	05	03	04	05	03	04	05
MELVILLE	Flatback		2						1	
	Green	1	3	4						
	Loggerhead			1						
	Unidentified species	1								
FOGBAY	Flatback									
	Green			1						
	Pacific Ridley									
BONAPARTE	Flatback	1								
	Green	1		2						
	Hawksbill									
	Pacific Ridley									
	unidentified species									
TOTAL ALL AREAS	Flatback	9	11	4			1		1	1
	Green	10	6	18						
	Hawksbill		2				1			1
	Leatherback									
	Loggerhead		1	2						
	Pacific Ridley	3	4	3		2				
	unidentified species	5								
GRAND TOTAL	ALL SPECIES	27	24	27		2	2		1	2

Source: AFMA Logbook data

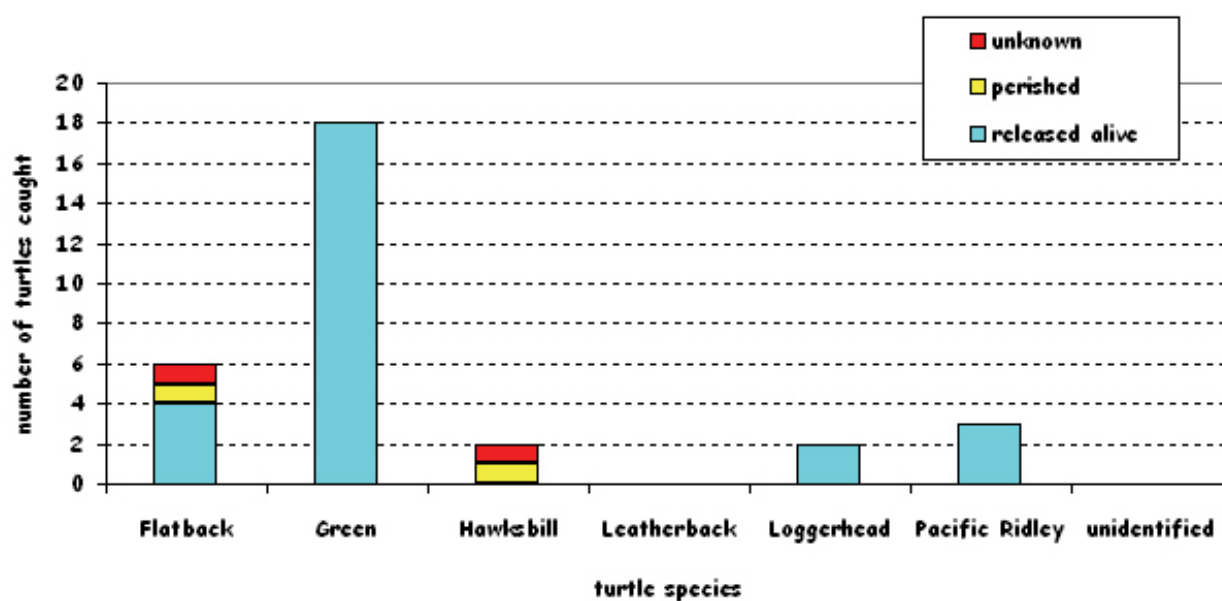


Figure 45. Turtle Bycatch in the Northern Prawn Fishery by Species in 2005

Source: AFMA logbook data



Sea snake Bycatch

Reported sea snake bycatch by statistical area for 2005 is shown in Table 6. Overall catch of sea snakes in 2005 was down compared with 2004 by 2,287. The areas with the highest bycatch levels for sea snake were Groote and Limmen Bight, which is consistent with 2004 data.

Table 6. Sea snake bycatch in each Statistical Area for 2005

<i>Statistical Area</i>	<i>Released Alive</i>	<i>Perished</i>	<i>Condition Unknown</i>
BOLD	157	35	46
BONAPARTE	432	116	76
GOVE	825	127	215
GROOTE	3001	360	386
LIMMEN BIGHT	1072	233	162
MELVILLE	409	101	122
MITCHELL	119	11	33
KEERWEER	8	0	5
MORNINGTON	418	99	198
PORT ESSINGTON	219	95	62
ARNHEM	72	22	7
EDWARD	293	35	46
FOG BAY	36	7	8
SWEERS	29	5	8
WEIPA	8	6	1
GRAND TOTAL	7098	1252	1375

Source: AFMA Logbook data



State/Territory Specific Data

Financial Year Catch of the NPF by State/Territory

Information on financial year catches taken in the waters of each State/Territory is included to meet Offshore Constitutional Settlement obligations with Queensland, the Northern Territory and Western Australia. The information is also used by the Australian Bureau of Agricultural and Resource Economics to calculate Gross Value of Product (GVP) figures.

During the 2004/2005 financial year, prawn catches in Queensland, the Northern Territory and Western Australia were lower compared with the the 2003/2004 financial year . Catches in Queensland dropped by 29 tonnes, Northern Territory by 923 tonnes and Western Australia by 165 tonnes.

Table 7. Over the page- Financial year catch of the NPF by State from 1991/92 to 2004/05.
Source: AFMA Logbook data.

Byproduct of the NPF by State/Territory

Logbook recording of byproduct species in the NPF has been required since 1995.

Bugs, squid, scallops and cuttlefish were the most commonly retained byproduct species in 2005 (Table 8). Bugs were the major byproduct species in 2005. Most bugs were caught in waters off the Northern Territory. The total retained byproduct for all states (QLD, NT and WA) in 2005 was up by 2,795kg on last years figure.



NORTHERN PRAWN FISHERY DATA SUMMARY 2005

<i>State</i>	<i>Financial year</i>	<i>banana (tonnes)</i>	<i>tiger (tonnes)</i>	<i>endeavour (tonnes)</i>	<i>king (tonnes)</i>	<i>total catch (tonnes)</i>
QLD	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
NT	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
WA	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



Table 8. Retained byproduct of the NPF by state in 2005.

Source: AFMA Logbook data.

<i>Species</i>	TOTAL wt (kg)	QLD wt (kg)	NT wt (kg)	WA wt (kg)
Black pomfret	1118	40	1064	14
Bugs - Shovel nosed and slipper lobsters	34685.5	12624.5	20274.5	1786.5
Commercial scallop	47		47	
Crustacea	10			10
Cuttlefishes	9309	1898	7309	102
Goatfishes - Barbounia	63		63	
Golden snapper - Fingermark seaperch	131.5	37.5	40	54
Mackerel	105	105		
Mackerells	75		75	
Mangrove Jack	101	101		
Mantis shrimp	93	31	62	
Mixed fish	200	18	176	6
Mixed reef fish	120	20		100
Mud scallop	328		328	
Octopuses	313	19	294	
Pilchard	1964	164	1800	
Pink snapper	52.5	12.5	40	
Pomfret	473	18	228	227
Ray's Bream	15			15
Redfish	23	20	3	
Scallops	5985	60	5925	
Sea Bass	24	24		
Soles	36		36	
Spiny lobsters - Mixed crayfish	106			106
Squids	21367	5004.5	15828.5	534
Striped Seapike / Pike	3		3	
Tropical rock lobsters	293.5		77	216.5
TOTAL	79847	22675	54001	3171

