Economic Indicators for the Commercial Fisheries of South Australia Summary Report, 2001/02

A report prepared for

Primary Industries and Resources South Australia

Prepared by

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Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
EBIT	earnings before interest and tax
FRDC	Fisheries Research and Development Corporation
GSV	Gulf St Vincent
GVP	gross value of production
PIRSA	Primary Industries and Resources South Australia
R & M	repairs and maintenance
SARDI	South Australian Research and Development Institute
SG & WC	Spencer Gulf and West Coast

1. Introduction

All the major fisheries in South Australia (SA) operate in accordance with fishery management plans that determine the primary management objectives of the fishery. Economic performance indicators are a feature of these plans and annual reports on them are required for the Minister for Agriculture, Food and Fisheries to meet the obligations of section 20 of the *Fisheries Act 1982*.

This study summarises the results of economic surveys that were conducted in each of the state's commercial fisheries for 1997/98, follow-up surveys in 2000/01 or 2001/02 and updates of these base data in the intervening years.

The aim is to present a set of economic performance indicators for each of the fisheries as well as to develop a consistent time-series of economic information to aid management of the fishery in future years. These economic performance indicators include:

- gross value of production (catch and price);
- the cost of management of the fishery;
- financial performance indicators (income, costs, profit, and return on investment);
- determination of any major cost increases;
- economic impact of the fishery; and
- economic rent.

2. Surveys and Definition of Terms

2.1 Surveys

The questionnaires for the initial (1998) and recent (2002 and 2003) surveys of the fisheries were drafted by the consultants and subsequently modified after consultation with industry representatives. Details of the procedures and response rates are detailed in the individual reports for each of the fisheries (EconSearch 1999 a to h, EconSearch 2002 a to h and EconSearch 2003 a to i).

2.2 Definition of Terms[1]

Gross value of production (GVP) is the total annual catch for the fishery valued at the landed beach price.

Gross income is the income received by the individual licence holder from the sale of fish prior to any deductions for freight and selling charges.

Total cash costs include the payments for hired labour and materials and services, including payments on capital items subject to leasing, rent, interest, licence fees and repairs and maintenance. If family or other labour were unpaid, an estimate of the cost of labour was made based on the time spent on fishing business related activity.

Cash operating surplus is the difference between gross income and total cash costs. It has been calculated with the imputed value of unpaid labour included in cash costs.

Depreciation is a non-cash cost representing the wear and tear on capital items during the year. It has been calculated using information on the age, current value and current replacement cost of each item.

Earnings before tax is defined as cash operating surplus less depreciation.

Earnings before interest and tax is defined as cash operating surplus less depreciation plus interest.

Capital is defined as the value placed on assets employed by the fishing business. It includes the total gross value of the boat, including the value of the hull, engine and other on-board and shore-based plant, equipment and structures. It does not include working capital or capital associated with other businesses operated by the licence holder. Estimates are also reported for the value of licences.

Rate of return to fishing gear and equipment is calculated by expressing earnings before interest and tax as a percentage of the capital value of fishing gear and equipment. The rate of return to fishing gear and equipment provides an indication of the impact of management changes on the fishery.

Rate of return to total capital is calculated by expressing earnings before interest and tax as a percentage of total capital. This gives a measure of the economic performance of the fishery for those interested in investing in a boat and licence.

[1] Where possible definitions have been kept consistent with those used by Brown (1997) in ABARE's *Australian Fisheries Survey Report*.

Value added is calculated as the value of output less the cost of goods and services used in producing the output. Value added is consistent with standard measures of economic activity, such as gross domestic product and gross state product, and it provides an assessment of the net contribution to regional economic growth of a particular enterprise or activity.

3. Economic Indicators for the South Australian Commercial Fisheries

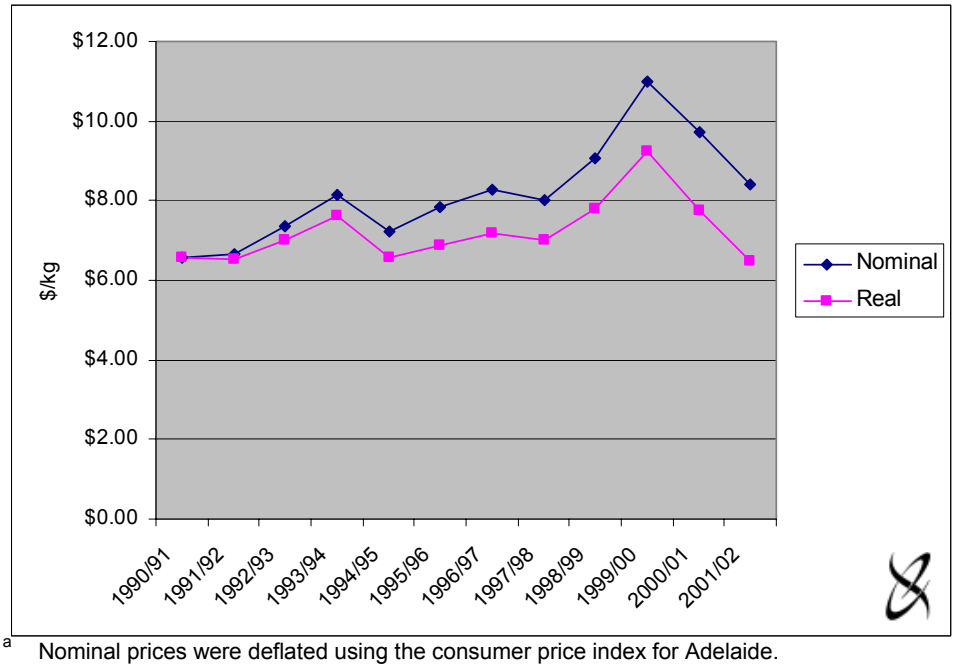
3.1 Gross Value of Production

The catch levels shown in Table 1 for the years 1990/91 to 2001/02 indicate the trends in total catch for each of the commercial fisheries. The data relate only to the state managed fisheries and thus exclude the southeast non-trawl, tuna, and deep-water trawl fisheries and also exclude aquaculture. Despite year-to-year fluctuations in individual fisheries, there was an upward trend in total catch from 1990/91 to 2001/02, total catch increased by approximately 60 per cent over this period.

The gross value of production (GVP) estimates shown in Table 2 for the years 1990/91 to 2001/02 indicate an increasing trend. Over this period GVP increased by 59 per cent in real terms (i.e. adjusted for inflation), this increase being due to an increase in total catch despite a decrease in average landed price. The average landed price per kilogram across all fisheries (real price in 1990/91 dollars) decreased by 1.1 per cent over the period, from $6.56 in 1990/91 to $6.49 in 2001/02, having been on a rising trend over the period 1990/91 to 1999/00 (Figure 1).

There were some notable changes in the relative contribution of each fishery to total SA fisheries GVP in the years 1990/91 and 2001/02 (Figures 2 and 3). The decline in the relative contribution of the northern zone rock lobster (18 per cent to 12 per cent) and other marine fisheries (17 per cent to 9 per cent) and an increase in the relative contribution of the abalone (14 per cent to 17 per cent) and pilchard fisheries (less than 1 per cent to 4 per cent) were the most significant changes.

Figure 1 Average Price across all Fisheries, South Australia, 1990/91 to 2001/02



[a] Nominal prices were deflated using the consumer price index for Adelaide.

Source: SARDI Aquatic Sciences and ABS (2003)

Table 1 Commercial Fisheries Catch – South Australia, 1990/91 – 2001/02 (tonnes)

Year	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lobster	Nth'n Zone Rock Lobster	Blue Swimmer Crabs	Inland Waters	Pilchards	Other Marine Species [a]	Total SA Fisheries [b]
1990/91	863	134	1,951	1,562	1,104	434	2,442	n.a.	7,108	15,598
1991/92	885	0	2,155	1,940	1,222	425	3,143	145	7,750	17,665
1992/93	869	0	1,645	1,754	1,064	511	2,640	1,230	7,499	17,212
1993/94	802	226	1,693	1,669	930	544	2,992	2,377	6,719	17,952
1994/95	851	148	1,911	1,720	891	608	2,884	2,803	9,744	21,560
1995/96	902	258	2,013	1,684	903	655	2,720	3,708	6,301	19,144
1996/97	903	211	1,813	1,635	893	464	2,657	3,428	6,507	18,511
1997/98	812	267	2,492	1,680	942	469	2,595	6,041	5,526	20,824
1998/99	933	336	2,425	1,713	1,016	501	2,355	4,465	4,964	18,708
1999/00	889	400	2,016	1,717	1,001	466	1,995	3,836	4,840	17,160
2000/01	867	384	2,603	1,716	846	556	2,293	7,368	5,132	21,765
2001/02	850	322	2,288	1,717	675	559	1,875	12,165	4,644	25,095

[a] Excludes south east non-trawl, tuna, deep water trawl.
[b] Excludes aquaculture, south east non-trawl, tuna, deep water trawl.

Source: SARDI Aquatic Sciences

Table 2 Commercial Fisheries Gross Value of Production – South Australia, 1990/91 – 2001/02 ($m)

Year	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lobster	Nth'n Zone Rock Lobster	Blue Swimmer Crabs	Inland Waters [a]	Pilchards	Other Marine Species [b]	Total SA Fisheries [c]
1990/91	14.0	1.7	20.0	26.7	18.2	1.6	2.3	na	17.8	102.4
1991/92	15.1	0.0	19.7	36.3	21.4	1.4	2.6	0.2	21.3	117.9
1992/93	23.7	0.0	19.7	34.8	20.5	1.6	5.3	0.8	20.3	126.7
1993/94	27.2	3.3	20.9	43.2	23.4	1.8	5.6	1.4	19.2	146.0
1994/95	22.8	1.9	22.6	48.6	25.5	2.2	6.3	1.6	24.5	156.1
1995/96	22.5	3.5	22.9	44.6	23.8	2.5	6.0	2.5	21.8	150.1
1996/97	25.2	2.9	22.2	47.0	24.4	2.1	6.3	2.2	20.6	152.9
1997/98	26.9	4.1	29.2	50.9	27.7	2.2	5.5	3.8	16.7	166.9
1998/99	27.2	5.0	34.6	47.2	26.7	2.2	6.3	2.5	18.0	169.7
1999/00	32.4	7.6	36.1	51.2	29.8	2.2	7.5	2.7	19.2	188.7
2000/01	40.0	6.7	46.0	55.1	28.0	3.1	7.8	5.2	20.2	212.0
2001/02	34.8	5.9	41.5	65.7	26.2	3.5	6.0	8.5	18.5	210.5

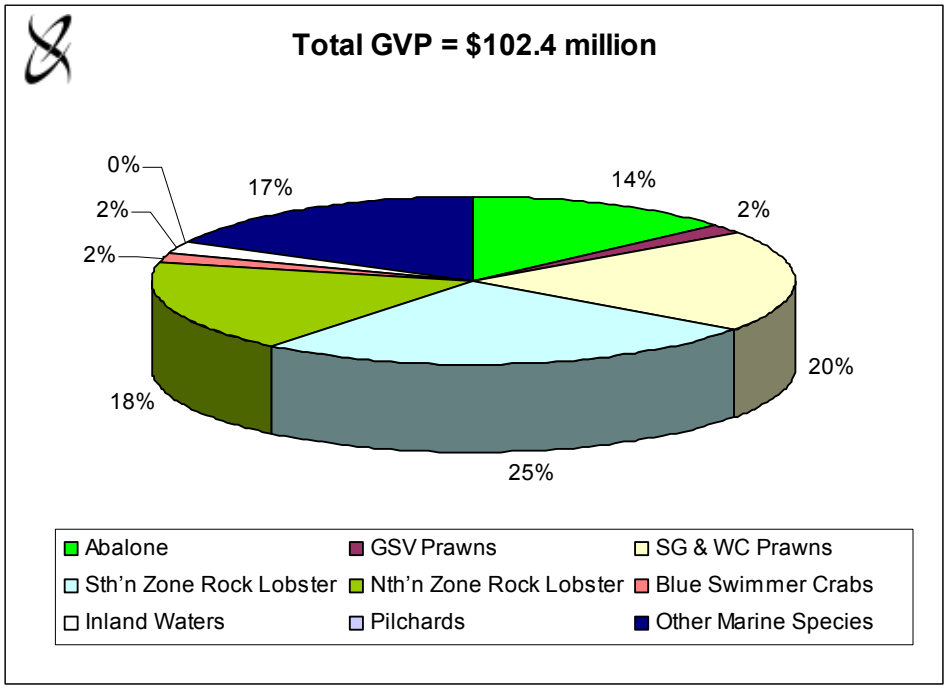
[a] SARDI estimates for the years 1990/91 and 1991/92 and re-valued SARDI estimates using Baker and Pierce (1998) in subsequent years.

[b] Excludes south east non-trawl, tuna, deep water trawl.

[c] Excludes aquaculture, south east non-trawl, tuna, deep water trawl.

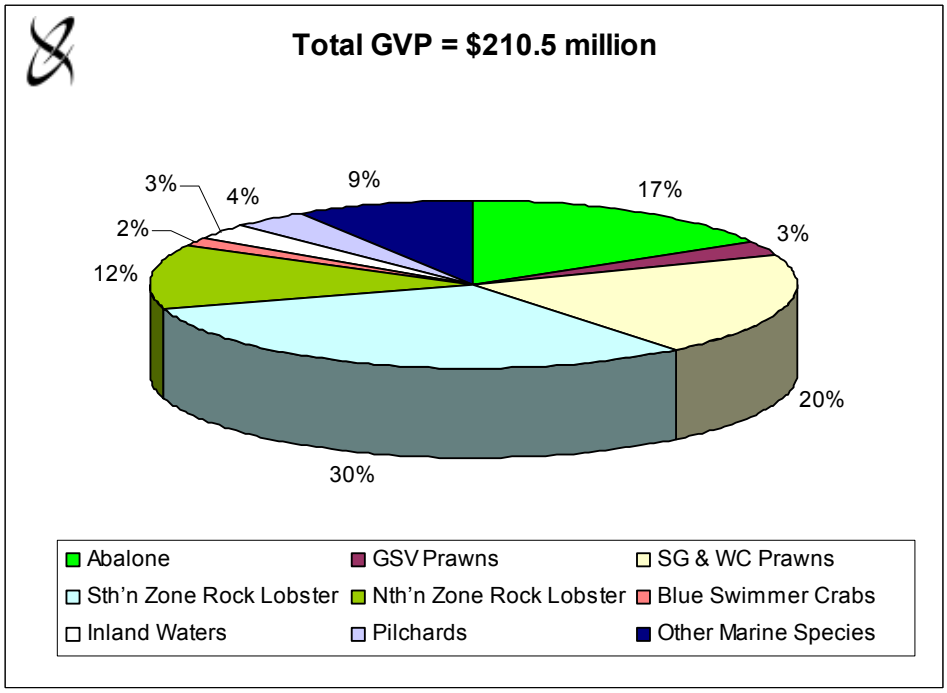
Source: SARDI Aquatic Sciences, Baker and Pierce (1998)

Figure 2 Contribution to Commercial Fisheries Gross Value of Production, South Australia, 1990/91



Source: SARDI Aquatic Sciences

Figure 3 Contribution to Commercial Fisheries Gross Value of Production, South Australia, 2001/02



Source: SARDI Aquatic Sciences

3.2 Cost of Management

South Australian commercial fisheries operate under full cost recovery. Accordingly, licence fees are set to cover the cost of managing the fishery. Management services include:

- annual reports on biological and economic indicators;
- policy and management services;
- regulatory/legislation and licensing services;
- compliance services;
- directorate services;
- extension services;
- research services (including the FRDC levy); and
- the services of various committees.

For the purpose of this analysis, the cost of providing these management services has been assumed to be equal to the gross receipts from licence fees in the fishery (Will Zacharin, pers. comm.).

Tables 3 to 9 show actual licence fee receipts for all fisheries for the period 1996/97 to 2002/03, respectively.

Over the period 1996/97 to 2001/02:

- total licence fees as a percentage of GVP decreased from 5.4 per cent to 3.7 per cent. For individual fisheries, licence fees as a percentage of GVP exhibited a declining trend over the period 1996/97 to 2000/01 and an increasing trend subsequently (Figure 4);
- the average cost of management per kilogram of landed fish decreased from $0.53 to $0.31; and
- the average cost of management per licence holder increased from $8,108 to $8,654 (excluding the pilchard fishery).

The total costs of management increased marginally between 2001/02 and 2002/03 from $7.8 million to $8.1 million. The average cost of management per licence holder, across all fisheries, also increased over this period from $9,001 to $9,553, reflecting the increase in the total costs of management and a decrease in the number of licence holders[2].

[2] Principally marine scalefish fishery licence holders.

Table 3 Cost of Management in South Australian Commercial Fisheries, 1996/97

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	2,217	25,184	8.8%	903	$2.46	35	$63,339
GSV Prawns	225	2,929	7.7%	211	$1.07	10	$22,513
SG & WC Prawns	695	22,222	3.1%	1,813	$0.38	42	$16,536
Sth'n Zone Rock Lobster	2,200	47,003	4.7%	1,635	$1.35	185	$11,890
Nth'n Zone Rock Lobster	868	24,376	3.6%	893	$0.97	77	$11,278
Blue Crabs - Pots	170	1,816	9.4%	408	$0.42	6	$28,400
Blue Crabs – Marine Scale	29	241	11.9%	54	$0.53	26	$1,107
Inland Fisheries	245	6,119	4.0%	2,656	$0.09	76	$3,224
Marine Scalefish	1,419	20,638	6.9%	6,507	$0.22	538	$2,637
Total SA	8,068	150,528	5.4%	15,080	$0.53	995	$8,108

Source: PIRSA Fisheries, SARDI Aquatic Sciences

Table 4 Cost of Management in South Australian Commercial Fisheries, 1997/98

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	2,608	26,883	9.7%	812	$3.21	35	$74,519
GSV Prawns	188	4,087	4.6%	267	$0.70	10	$18,790
SG & WC Prawns	1,004	29,160	3.4%	2,492	$0.40	42	$23,914
Sth'n Zone Rock Lobster	2,610	50,872	5.1%	1,680	$1.55	184	$14,186
Nth'n Zone Rock Lobster	1,216	27,683	4.4%	942	$1.29	75	$16,208
Blue Crabs - Pots	208	1,713	12.1%	401	$0.52	6	$34,600
Blue Crabs – Marine Scale	100	313	31.8%	73	$1.36	26	$3,829
Inland Fisheries	291	5,477	5.3%	2,596	$0.11	68	$4,272
Marine Scalefish	1,646	16,711	9.9%	5,526	$0.30	495	$3,325
Total SA	9,870	162,899	6.1%	14,789	$0.67	941	$10,489

Source: PIRSA Fisheries, SARDI Aquatic Sciences

Table 5 Cost of Management in South Australian Commercial Fisheries, 1998/99

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	1,890	27,161	7.0%	933	$2.03	35	$53,993
GSV Prawns	200	5,043	4.0%	336	$0.59	10	$19,988
SG & WC Prawns	704	36,135	1.9%	2,016	$0.35	42	$16,762
Sth'n Zone Rock Lobster	2,145	47,165	4.5%	1,713	$1.25	184	$11,659
Nth'n Zone Rock Lobster	832	26,743	3.1%	1,016	$0.82	73	$11,397
Blue Crabs - Pots	181	1,913	9.4%	429	$0.42	6	$30,090
Blue Crabs – Marine Scale	117	321	36.4%	72	$1.62	32	$3,647
Inland Fisheries	240	6,263	3.8%	2,354	$0.10	68	$3,535
Marine Scalefish	1,646	17,049	9.7%	5,594	$0.29	513	$3,209
Total SA	7,954	167,793	4.7%	14,463	$0.55	963	$8,260

Source: PIRSA Fisheries, SARDI Aquatic Sciences

Table 6 Cost of Management in South Australian Commercial Fisheries, 1999/00

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	1,781	32,394	5.5%	889	$2.00	35	$50,896
GSV Prawns	174	7,636	2.3%	400	$0.44	10	$17,422
SG & WC Prawns	704	36,135	1.9%	2,016	$0.35	42	$16,762
Sth'n Zone Rock Lobster	2,009	51,163	3.9%	1,717	$1.17	183	$10,979
Nth'n Zone Rock Lobster	731	29,875	2.4%	1,004	$0.73	71	$10,293
Blue Crabs - Pots	164	1,916	8.6%	416	$0.39	6	$27,315
Blue Crabs – Marine Scale	114	233	49.1%	51	$2.24	27	$4,238
Inland Fisheries	285	7,480	3.8%	1,995	$0.14	68	$4,195
Marine Scalefish	1,476	19,897	7.4%	4,869	$0.30	463	$3,188
Total SA	7,439	186,729	4.0%	13,357	$0.56	905	$8,220

Source: PIRSA Fisheries, SARDI Aquatic Sciences

Table 7 Cost of Management in South Australian Commercial Fisheries, 2000/01

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	1,604	40,011	4.0%	867	$1.85	35	$45,817
GSV Prawns	168	6,674	2.5%	384	$0.44	10	$16,762
SG & WC Prawns	651	46,008	1.4%	2,603	$0.25	42	$15,508
Sth'n Zone Rock Lobster	2,102	54,738	3.8%	1,716	$1.23	182	$11,551
Nth'n Zone Rock Lobster	755	27,988	2.7%	846	$0.89	69	$10,945
Blue Crabs - Pots	140	2,588	5.4%	469	$0.30	6	$23,352
Blue Crabs – Marine Scale	149	479	31.0%	87	$1.71	20	$7,428
Inland Fisheries	295	7,761	3.8%	2,293	$0.13	68	$4,345
Marine Scalefish	1,460	21,042	6.9%	5,255	$0.28	450	$3,244
Total SA	7,324	207,289	3.5%	14,520	$0.50	882	$8,304

Source: PIRSA Fisheries, SARDI Aquatic Sciences

Table 8 Cost of Management in South Australian Commercial Fisheries, 2001/02

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	1,719	34,755	4.9%	850	$2.02	35	$49,115
GSV Prawns	169	5,870	2.9%	322	$0.52	10	$16,865
SG & WC Prawns	610	41,534	1.5%	2,288	$0.27	42	$14,527
Sth'n Zone Rock Lobster	2,211	65,671	3.4%	1,717	$1.29	180	$12,283
Nth'n Zone Rock Lobster	686	26,190	2.6%	675	$1.02	69	$9,938
Blue Crabs - Pots	166	2,975	5.6%	481	$0.35	6	$27,746
Blue Crabs – Marine Scale	153	486	31.4%	79	$1.93	19	$8,032
Inland Fisheries	296	5,951	5.0%	1,875	$0.16	68	$4,352
Marine Scalefish	1,407	19,027	7.4%	4,722	$0.30	428	$3,287
Pilchards	423	8,516	5.0%	12,165	$0.03	14	$30,224
Total SA	7,839	210,975	3.7%	25,174	$0.31	871	$9,001

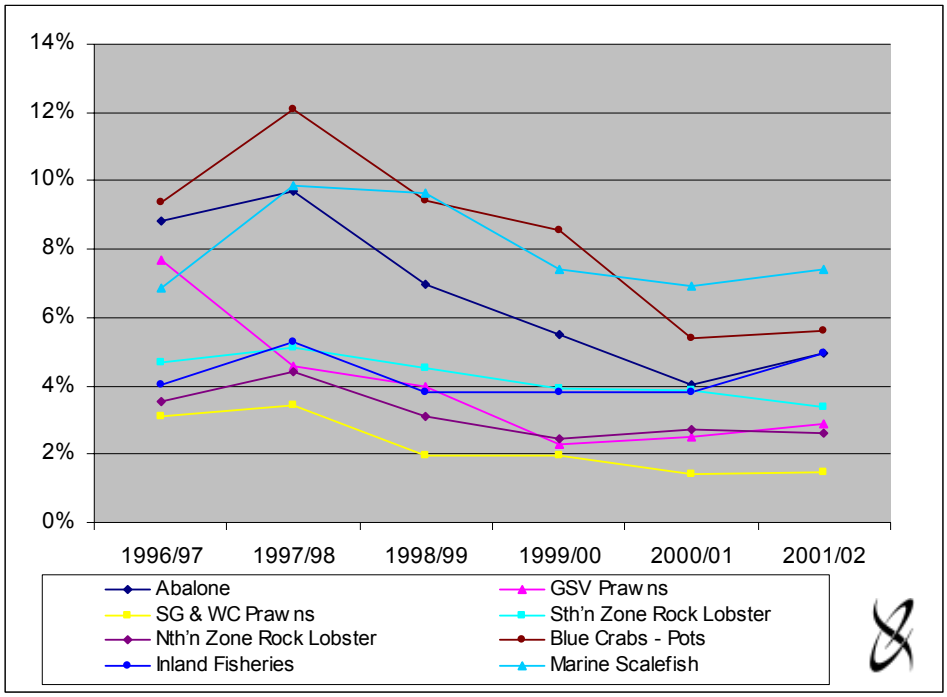
Source: PIRSA Fisheries, SARDI Aquatic Sciences

Table 9 Cost of Management in South Australian Commercial Fisheries, 2002/03

	Licence Fees ($'000)	GVP ($'000)	Fees/ GVP (%)	Catch ('000kg)	Fees/ Catch ($/kg)	Licence Holders (no.)	Fees/ Licence ($/licence)
Abalone	1,848	n.a.	-	n.a.	-	35	$52,805
GSV Prawns	275	n.a.	-	n.a.	-	10	$27,455
SG & WC Prawns	717	n.a.	-	n.a.	-	42	$17,076
Sth'n Zone Rock Lobster	2,156	n.a.	-	n.a.	-	180	$11,975
Nth'n Zone Rock Lobster	805	n.a.	-	n.a.	-	69	$11,666
Blue Crabs - Pots	131	n.a.	-	n.a.	-	7	$18,782
Blue Crabs – Marine Scale	130	n.a.	-	n.a.	-	17	$7,675
Inland Fisheries	396	n.a.	-	n.a.	-	67	$5,915
Marine Scalefish	1,218	n.a.	-	n.a.	-	408	$2,986
Pilchards	434	n.a.	-	n.a.	-	14	$30,974
Total SA	8,111	n.a.	-	n.a.	-	849	$9,553

Source: PIRSA Fisheries, SARDI Aquatic Sciences

Figure 4 Licence Fees as a Proportion of GVP, South Australian Commercial Fisheries, 1996/97 to 2001/02



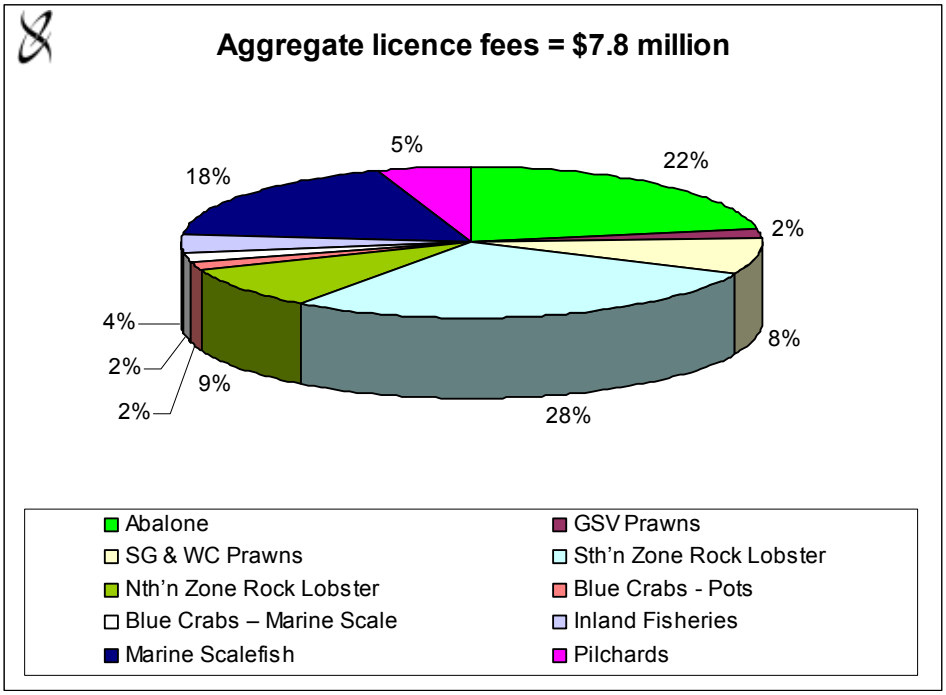
[a] Data for the blue crabs – marine scalefish and pilchard fisheries have been excluded from Figure 4 for illustrative purposes. Over the period 1996/97 to 2001/02, licence fees as a proportion of GVP increased from 12 per cent to 31 per cent in the blue crabs – marine scalefish fishery while only one data point (2001/02) was available for the pilchard fishery.

Source: PIRSA Fisheries, SARDI Aquatic Sciences

The contribution of individual fisheries to aggregate SA commercial fisheries licence fees in 2001/02 is outlined in Figure 5. There are some interesting comparisons with the data in Figure 3:

- The inland waters fishery contributes equally to aggregate licence fees and total GVP;
- The abalone, marine scalefish, pilchards and blue crab fisheries make a contribution to aggregate licence fees greater than their relative contribution to total GVP; and
- The two prawn fisheries and the two rock lobster fisheries make a contribution to aggregate licence fees less than their relative contribution to total GVP.

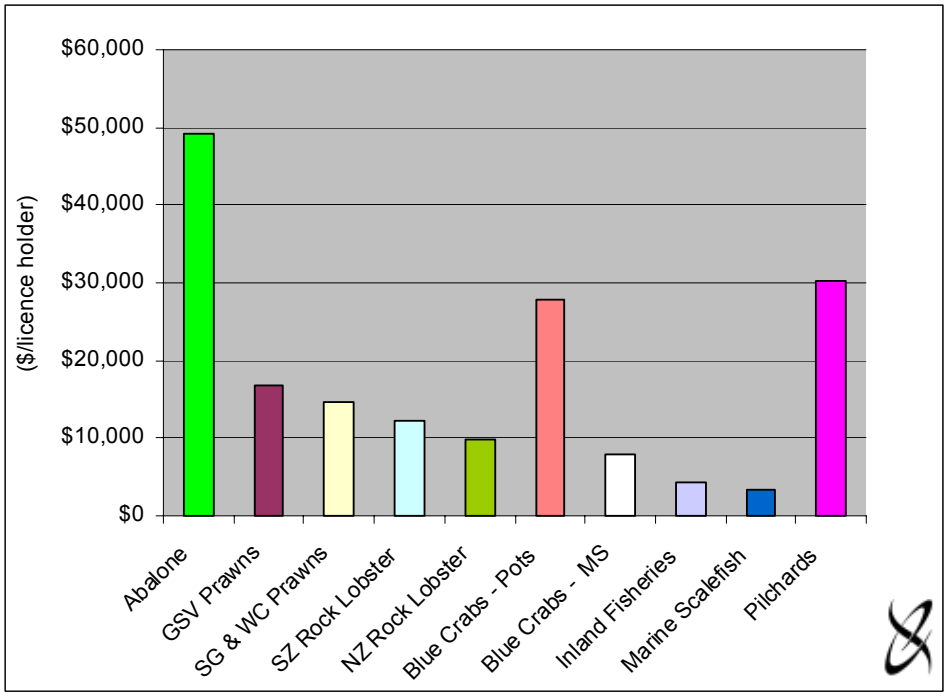
Figure 5 Contribution to Aggregate Licence Fees, South Australian Commercial Fisheries, 2001/02



Source: PIRSA Fisheries

The average fees per licence in SA commercial fisheries in 2001/02 are outlined in Figure 6.

Figure 6 South Australian Commercial Fisheries, Fees per Licence Holder, 2001/02



Source: PIRSA Fisheries

3.3 Financial Performance Indicators

The major measures of the financial performance of the surveyed boats in the State's commercial fisheries[3] for the period 1997/98 to 2001/02 are shown in Tables 10 to 14, respectively.

Income…

In 1997/98 the average gross income per boat ranged from approximately $35,000 in the marine scalefish fishery to just over $750,000 in the abalone fishery (Table 10). In 2001/02 the average gross income per boat ranged from approximately $47,000 in the marine scalefish fishery to $993,000 in the abalone fishery (Table 14).

Costs…

Labour was the highest cost item for all commercial fisheries, ranging from 32 per cent of cash costs in the blue crabs marine scale fishery to 70 per cent in the abalone fishery in 2001/02 (Table 19). Across all commercial fisheries, labour costs averaged 55 per cent of total cash costs in 2001/02. Note that for all fisheries the labour cost includes an imputed value for the licence holder's own labour as well as for unpaid family labour.

Licence fees ranged from 3 per cent of cash costs in the Spencer Gulf and West Coast prawn fishery to 32 per cent in the blue crabs - marine scale fishery in 2001/02. Across all commercial fisheries, licence fees averaged 10 per cent of total cash costs in 2001/02, the second highest individual cost item along with fuel. The other significant cash cost item was repairs and maintenance which averaged 9 per cent across all fisheries in 2001/02.

Cash Income and Profit…

As noted elsewhere, the labour costs reported in Tables 10 to 14 are comprised of payments to skippers and crew as well as an imputed wage to operators and other family members who are not paid a wage directly by the business. Accordingly, cash operating surplus was calculated by including imputed wages as part of cash costs. The cash operating surplus was estimated to range from -$7,000 in the marine scalefish fishery to over $390,000 in the abalone fishery in 1997/98 and from -$4,000 in the marine scalefish fishery to over $594,000 in the abalone fishery in 2001/02.

[3] Note that there was an inadequate response to the (1997/98 and 2001/02) survey of licence holders in the inland waters fisheries (lakes & Coorong and river) and financial performance indicators are not reported for these fisheries.

Table 10 Financial Performance in South Australian Commercial Fisheries, 1997/98, ($'000) (average per boat)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Gross Income	**751.3**	**408.7**	**701.1**	**282.3**	**373.8**	**382.2**	**40.1**	**35.7**
Costs								
Fuel	11.5	15.6	40.7	15.5	25.3	33.6	6.4	4.8
R&M	21.5	21.2	58.8	18.4	24.8	32.5	1.9	6.4
Labour	217	161.5	240.6	108.2	130.9	175	13.4	18.2
Licence fee [b]	66.3	38.8	19.8	13.2	13.9	32.6	9.4	3.4
Insurance	4.4	6.7	14	4.5	8	5.2	0.8	0.8
Interest	12	1.7	24.2	9.3	22.1	1.7	1	1.7
Admin & Other	23.5	19.8	44	25.3	40.3	25	3.2	7.8
Total Cash Costs	**356.1**	**265.4**	**442**	**194.3**	**265.5**	**305.6**	**36**	**43.1**
Cash Operating Surplus	**395.2**	**143.3**	**259.1**	**88**	**108.4**	**76.7**	**4.1**	**-7.4**
Depreciation	**18**	**47.9**	**63.6**	**27.1**	**45.3**	**24.2**	**4.3**	**8**
Earnings Before Tax	**377.2**	**95.4**	**195.5**	**60.9**	**63**	**52.4**	**-0.2**	**-15.5**
EBIT [c]	**389.2**	**97.1**	**219.7**	**70.1**	**85.2**	**54.1**	**0.7**	**-13.7**
Capital								
Fishing Gear & Equipment	117.1	142.7	899.5	238	398.1	214.3	26.5	64.4
Licence Value	3,741.70	1,000.00	1,727.80	1,342.40	1,494.70	540	50.5	34.6
Total Capital	**3,858.80**	**1,142.70**	**2,627.30**	**1,580.30**	**1,892.80**	**754.3**	**77**	**98.9**
Rate of Return to Gear/Equip	**332.2%**	**68.1%**	**24.4%**	**29.5%**	**21.4%**	**25.3%**	**2.8%**	**-21.4%**
Rate of Return to Capital	**10.1%**	**8.5%**	**8.4%**	**4.4%**	**4.5%**	**7.2%**	**1.0%**	**-13.9%**

[a] Excludes pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.
[b] Includes buy-back surcharge.
[c] Earnings before interest and tax.

Source: EconSearch 1999 a, b, c, d, e, f, g

Table 11 Financial Performance in South Australian Commercial Fisheries, 1998/99, ($'000) (average per boat)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Gross Income	**776.0**	**504.3**	**823.1**	**263.1**	**371.0**	**398.0**	**38.3**	**40.7**
Costs								
Fuel	11.8	13.9	37.3	12.7	23.1	33.7	4.4	4.3
R&M	23.8	20.3	58.0	16.2	24.4	35.1	1.4	6.2
Labour	224.1	199.1	282.4	100.8	130.0	182.2	12.8	17.4
Licence fee	48.0	20.0	15.5	10.8	9.8	28.3	11.8	3.2
Insurance	4.4	6.8	14.2	3.7	8.0	5.3	0.8	0.8
Interest	11.0	1.6	22.3	8.6	20.4	1.6	0.9	1.6
Admin & Other	24.0	20.0	44.3	23.8	40.0	26.2	2.9	7.7
Total Cash Costs	**347.2**	**281.7**	**474.1**	**176.6**	**255.7**	**312.5**	**34.9**	**41.1**
Cash Operating Surplus	**428.8**	**222.6**	**349.0**	**86.5**	**115.3**	**85.5**	**3.4**	**-0.5**
Depreciation	**18.2**	**48.5**	**70.4**	**27.5**	**50.5**	**24.5**	**4.4**	**8.2**
Earnings Before Tax	**410.6**	**174.1**	**278.7**	**59.0**	**64.8**	**61.0**	**-1.0**	**-8.6**
EBIT [b]	**421.6**	**175.7**	**301.0**	**67.6**	**85.2**	**62.6**	**-0.1**	**-7.0**
Capital								
Fishing Gear & Equipment	118.7	144.5	995.3	240.7	443.5	217.2	26.8	65.2
Licence Value	4,053.9	1,804.5	2,367.0	1,294.1	1,496.0	562.3	48.2	37.1
Total Capital	**4,172.5**	**1,949.1**	**3,362.3**	**1,534.8**	**1,939.5**	**779.5**	**75.0**	**102.3**
Rate of Return to Gear/Equip	**355.3%**	**121.5%**	**30.2%**	**28.1%**	**19.2%**	**28.8%**	**-0.2%**	**-10.8%**
Rate of Return to Capital	**10.1%**	**9.0%**	**9.0%**	**4.4%**	**4.4%**	**8.0%**	**-0.1%**	**-6.9%**

[a] Excludes pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.
[b] Earnings before interest and tax.

Source: EconSearch 1999 i, j and 2000a, b, c, d, e

Table 12 Financial Performance in South Australian Commercial Fisheries, 1999/00, ($'000) (average per boat)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Gross Income	**925.5**	**763.6**	**860.4**	**287.0**	**383.6**	**398.7**	**27.8**	**45.5**
Costs								
Fuel	15.4	24.4	55.4	14.4	33.3	44.0	5.5	6.5
R&M	21.3	24.4	58.9	12.6	24.0	31.3	1.2	6.4
Labour	267.3	301.5	295.2	110.0	134.4	182.5	9.3	18.1
Licence fee	45.3	17.4	13.9	10.2	8.8	25.7	10.7	3.2
Insurance	4.5	7.0	14.5	3.5	8.2	5.4	0.8	0.8
Interest	12.2	1.8	22.9	9.5	22.6	1.7	1.0	1.7
Admin & Other	24.3	20.6	45.4	21.4	39.9	25.1	2.9	7.9
Total Cash Costs	**390.4**	**397.0**	**506.2**	**181.5**	**271.2**	**315.7**	**31.3**	**44.6**
Cash Operating Surplus	**535.2**	**366.6**	**354.2**	**105.6**	**112.4**	**82.9**	**-3.5**	**13.5**
Depreciation	**18.7**	**49.7**	**67.8**	**25.8**	**49.6**	**25.2**	**4.5**	**8.4**
Earnings Before Tax	**516.5**	**316.9**	**286.4**	**79.8**	**62.8**	**57.8**	**-8.0**	**-7.5**
EBIT [b]	**528.8**	**318.7**	**309.3**	**89.3**	**85.5**	**59.5**	**-7.0**	**-5.7**
Capital								
Fishing Gear & Equipment	121.7	148.2	959.0	225.9	435.7	222.6	27.5	66.9
Licence Value	5,083.8	3,273.3	2,432.0	1,708.6	1,499.7	563.2	35.0	40.4
Total Capital	**5,205.5**	**3,421.5**	**3,391.0**	**1,934.5**	**1,935.4**	**785.8**	**62.5**	**107.2**
Rate of Return to Gear/Equip	**434.6%**	**215.0%**	**32.3%**	**39.5%**	**19.6%**	**26.7%**	**-25.4%**	**-8.6%**
Rate of Return to Capital	**10.2%**	**9.3%**	**9.1%**	**4.6%**	**4.4%**	**7.6%**	**-11.2%**	**-5.3%**

[a] Excludes pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.
[b] Earnings before interest and tax.

Source: EconSearch 2001 a, b, c, d, e, f, g, h

Table 13 Financial Performance in South Australian Commercial Fisheries, 2000/01, ($'000) (average per boat)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Gross Income	**1,143.2**	**667.4**	**1,004.7**	**300.6**	**400.4**	**538.5**	**57.2**	**48.9**
Costs								
Fuel	10.9	24.0	51.5	15.5	46.5	52.3	10.6	5.8
R&M	24.3	23.8	45.3	12.3	30.1	37.0	2.3	4.4
Labour	322.4	263.5	381.7	106.1	154.9	246.5	16.9	22.2
Licence fee	45.4	16.8	15.1	12.4	11.9	22.0	14.0	3.6
Insurance	4.6	7.4	11.1	4.1	8.7	5.8	0.8	1.8
Interest	3.2	1.6	14.6	17.2	35.5	1.5	0.9	0.3
Admin & Other	25.6	21.5	39.7	21.7	21.1	28.0	3.7	8.2
Total Cash Costs	**436.4**	**358.7**	**565.1**	**197.6**	**329.8**	**393.1**	**49.2**	**46.2**
Cash Operating Surplus	**706.8**	**308.7**	**439.6**	**103.0**	**70.6**	**145.4**	**8.0**	**18.1**
Depreciation	**35.0**	**52.6**	**98.6**	**39.2**	**56.9**	**26.6**	**4.8**	**7.7**
Earnings Before Tax	**671.8**	**256.1**	**341.0**	**63.8**	**13.7**	**118.8**	**3.2**	**-5.0**
EBIT [b]	**675.0**	**257.7**	**355.6**	**81.0**	**49.2**	**120.3**	**4.1**	**-4.8**
Capital								
Fishing Gear & Equipment	162.0	156.6	1,010.0	283.5	545.2	235.3	29.1	61.6
Licence Value	5,700.0	2,647.0	3,936.4	2,378.7	2,160.0	760.8	71.9	84.2
Total Capital	**5,862.0**	**2,803.6**	**4,946.3**	**2,662.2**	**2,705.2**	**996.1**	**101.0**	**145.9**
Rate of Return to Gear/Equip	**416.8%**	**164.5%**	**35.2%**	**28.6%**	**9.0%**	**51.1%**	**14.2%**	**-7.7%**
Rate of Return to Capital	**11.5%**	**9.2%**	**7.2%**	**3.0%**	**1.8%**	**12.1%**	**4.1%**	**-3.3%**

[a] Excludes pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.
[b] Earnings before interest and tax.

Source: EconSearch 2002 a, b, c, d, e, f, g, h

Table 14 Financial Performance in South Australian Commercial Fisheries, 2001/02, ($'000) (average per boat)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]	Pilchards
Gross Income	**993.0**	**595.4**	**907.0**	**364.7**	**374.7**	**619.0**	**58.0**	**46.5**	**845.1**
Costs									
Fuel	10.8	31.4	46.2	13.2	41.1	49.2	8.7	5.7	49.1
R&M	25.2	42.8	42.4	11.0	27.7	36.3	1.9	4.4	94.9
Labour	280.0	189.6	344.6	128.7	144.9	283.4	14.4	22.7	300.6
Licence fee	48.7	43.0	14.1	13.2	10.8	26.1	14.2	3.6	30.1
Insurance	4.7	19.7	11.4	4.2	9.0	5.9	0.9	1.8	13.6
Interest	3.0	1.5	15.0	16.2	33.3	1.5	0.9	0.3	9.7
Admin & Other	26.4	36.5	46.6	28.5	38.7	28.1	3.5	8.4	67.4
Total Cash Costs	**398.7**	**364.5**	**520.3**	**215.0**	**305.5**	**430.5**	**44.4**	**46.9**	**565.3**
Cash Operating Surplus	**594.3**	**230.9**	**386.7**	**149.7**	**69.2**	**188.5**	**13.6**	**-0.4**	**279.7**
Depreciation	**35.9**	**83.1**	**107.3**	**39.5**	**62.2**	**27.3**	**4.9**	**7.9**	**109.2**
Earnings Before Tax	**558.4**	**147.8**	**279.4**	**110.2**	**6.9**	**161.2**	**8.7**	**-8.4**	**170.5**
EBIT [b]	**561.4**	**149.3**	**294.4**	**126.4**	**40.2**	**162.6**	**9.5**	**-8.1**	**180.2**
Capital									
Fishing Gear & Equipment	166.4	301.2	1,099.6	285.6	596.4	241.8	29.9	63.3	1,037.7
Licence Value	4,740.3	2,400.0	3,258.8	3,709.8	2,021.2	874.5	73.0	76.2	3,183.3
Total Capital	**4,906.7**	**2,701.2**	**4,358.4**	**3,995.5**	**2,617.6**	**1,116.4**	**102.9**	**139.5**	**4,221.1**
Rate of Return to Gear/Equip	**337.3%**	**49.6%**	**26.8%**	**44.3%**	**6.7%**	**67.2%**	**31.9%**	**-12.8%**	**17.4%**
Rate of Return to Capital	**11.4%**	**5.5%**	**6.8%**	**3.2%**	**1.5%**	**14.6%**	**9.3%**	**-5.8%**	**4.3%**

[a] Excludes the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.
[b] Earnings before interest and tax.

Source: EconSearch 2003 a, b, c, d, e, f, g, h, i

Table 15 Costs as a Percentage of Total Cash Costs in South Australian Commercial Fisheries, 1997/98

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Fuel	3%	6%	9%	8%	10%	11%	18%	11%
R&M	6%	8%	13%	9%	9%	11%	5%	15%
Labour	61%	61%	54%	56%	49%	57%	37%	42%
Licence fee	19%	15%	4%	7%	5%	11%	26%	8%
Insurance	1%	3%	3%	2%	3%	2%	2%	2%
Interest	3%	1%	5%	5%	8%	1%	3%	4%
Admin & Other	7%	7%	10%	13%	15%	8%	9%	18%
Total Cash Costs	100%	100%	100%	100%	100%	100%	100%	100%

[a] Excludes pilchards.

Source: EconSearch 1999 a, b, c, d, e, f, g

Table 16 Costs as a Percentage of Total Cash Costs in South Australian Commercial Fisheries, 1998/99

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Fuel	3%	5%	8%	7%	9%	11%	13%	10%
R&M	7%	7%	12%	9%	10%	11%	4%	15%
Labour	65%	71%	60%	57%	51%	58%	37%	42%
Licence fee	14%	7%	3%	6%	4%	9%	34%	8%
Insurance	1%	2%	3%	2%	3%	2%	2%	2%
Interest	3%	1%	5%	5%	8%	1%	3%	4%
Admin & Other	7%	7%	9%	13%	16%	8%	8%	19%
Total Cash Costs	100%	100%	100%	100%	100%	100%	100%	100%

[a] Excludes pilchards.

Source: EconSearch 1999 i, j and 2000 a, b, c, d, e

Table 17 Costs as a Percentage of Total Cash Costs in South Australian Commercial Fisheries, 1999/00

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Fuel	4%	6%	11%	8%	12%	14%	18%	15%
R&M	5%	6%	12%	7%	9%	10%	4%	14%
Labour	68%	76%	58%	61%	50%	58%	30%	41%
Licence fee	12%	4%	3%	6%	3%	8%	34%	7%
Insurance	1%	2%	3%	2%	3%	2%	3%	2%
Interest	3%	0%	5%	5%	8%	1%	3%	4%
Admin & Other	6%	5%	9%	12%	15%	8%	9%	18%
Total Cash Costs	100%	100%	100%	100%	100%	100%	100%	100%

[a] Excludes pilchards.

Source: EconSearch 2001 a, b, c, d, e, f, g, h

Table 18 Costs as a Percentage of Total Cash Costs in South Australian Commercial Fisheries, 2000/01

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish [a]
Fuel	2%	7%	9%	8%	14%	13%	22%	13%
R&M	6%	7%	8%	6%	9%	9%	5%	9%
Labour	74%	73%	68%	54%	47%	63%	34%	48%
Licence fee	10%	5%	3%	6%	4%	6%	28%	8%
Insurance	1%	2%	2%	2%	3%	1%	2%	4%
Interest	1%	0%	3%	9%	11%	0%	2%	1%
Admin & Other	6%	6%	7%	11%	6%	7%	7%	18%
Total Cash Costs	100%	100%	100%	100%	100%	100%	100%	100%

[a] Excludes pilchards.

Source: EconSearch 2002 a, b, c, d, e, f, g, h

Table 19 Costs as a Percentage of Total Cash Costs in South Australian Commercial Fisheries, 2001/02

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs Pot Sector	Blue Crabs MS Sector	Marine Scalefish	Pilchards
Fuel	3%	9%	9%	6%	13%	11%	20%	12%	9%
R&M	6%	12%	8%	5%	9%	8%	4%	9%	17%
Labour	70%	52%	66%	60%	47%	66%	32%	48%	53%
Licence fee	12%	12%	3%	6%	4%	6%	32%	8%	5%
Insurance	1%	5%	2%	2%	3%	1%	2%	4%	2%
Interest	1%	0%	3%	8%	11%	0%	2%	1%	2%
Admin & Other	7%	10%	9%	13%	13%	7%	8%	18%	12%
Total Cash Costs	100%	100%	100%	100%	100%	100%	100%	100%	100%

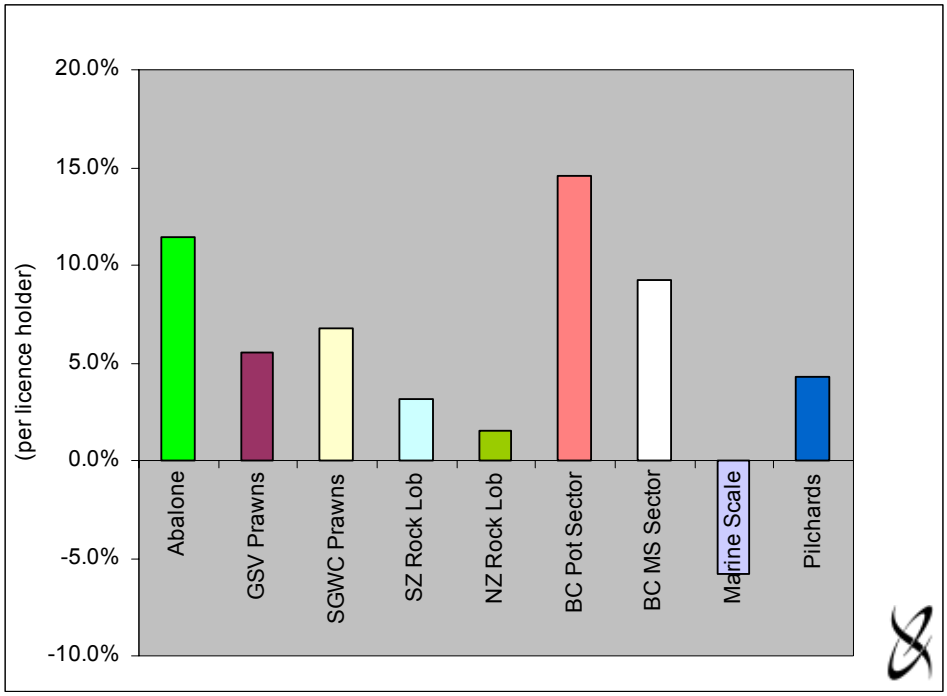
Source: EconSearch 2003 a, b, c, d, e, f, g, h, i

Return on Investment…

There are a number of interpretations of the concept of return on investment. For the purpose of this analysis it is appropriate to consider the investment as the capital employed by an average licence holder in the fishery. Capital includes boats, licence/quota, fishing gear, sheds, vehicles and other capital items used as part of the fishing enterprise. It does not include working capital or capital associated with other businesses operated by the licence holder. The return on investment has been calculated as the net profit after depreciation as a percentage of the total capital employed.

The average return on investment for each of the fisheries over the period 1997/98 to 2001/02 are reported in Tables 10 to 14, respectively. The rate of return to total capital was estimated to be positive for the average survey response in 1997/98 for all fisheries except marine scalefish. In 2001/02 the rate of return to total capital ranged from –5.8% for the marine scalefish fishery to 14.6% for the blue crabs – pot fishery (Figure 7).

Figure 7 South Australian Commercial Fisheries, Rate of Return To Capital, 2001/02



Source: Tables 10 to 14.

3.4 Determination of Major Cost Increases

As part of the survey conducted in 1998 the operators in each fishery were asked if there had been any major cost increases incurred by them between 1996/97 and 1997/98, and if they expected any major cost increases over the next 12 months. The majority of respondents in all fisheries, except marine scalefish, indicated they had not experienced any major cost increases over the previous 12 months nor were they expecting any significant increases during the current season. The majority of marine scalefish fishery respondents indicated they had experienced significant licence fee increases over the previous 12 months and were expecting further licence fee increases during the current season. Other areas of concern for marine scalefish fishers were anticipated increases in the cost of repairs and maintenance, capital replacement and fuel.

This question was repeated in the survey conducted in 2002. The operators in each fishery were asked if there had been any major cost increases incurred by them between 1999/00 and 2000/01, and if they expected any major cost increases over the next 12 months. The majority of respondents in all fisheries indicated they had not experienced any major cost increases over the previous 12 months nor were they expecting any significant increases during the current season.

3.5 Regional Economic Impact

3.5.1 Measuring flow-on (multiplier) effects

The economic impact of an industry extends beyond the direct or initial effects of the operators in the industry. Each of those activities generates flow-on effects to other sectors through purchases of inputs and the employment of labour. The commercial fisheries of South Australia generate export revenue for the state, create employment in catching and handling operations, and generate business in fishing service and supply industries.

These flow-on effects have been estimated using input-output analysis. While input-output analysis has a number of limitations, it is widely used in economic impact analysis and is the only practicable method for measuring economic impacts at the regional level.

The impacts for individual fisheries were estimated at state and regional levels. In this summary report the results are presented at the state level only, and impacts at the regional level are reported in most of the individual fisheries' reports. (EconSearch various – refer to references).

Costs per boat were derived from data provided by operators in each of the fisheries as described earlier. On an item-by-item basis, the expenditures were allocated between those occurring in South Australia and those goods and services imported from outside the state. These adjusted data were then incorporated into the state input-output model to estimate the flow-on or indirect economic impacts of the commercial fisheries in South Australia.

It is important to note that the economic impact of all fisheries in 1997/98 and 1998/99 does not include the direct and flow-on effects of capital expenditure by licensees, these effects have been included in subsequent years.

3.5.2 Economic impact

The estimated impacts of commercial fisheries[4] on the state's economy over the period 1997/98 to 2001/02 are provided in Tables 20 to 24, respectively.

Business turnover impacts...

There are substantial economic impacts from the state's commercial fisheries. Direct business income (turnover) generated by licence holders in the surveyed fisheries summed to $205m in 2001/02. Flow-ons to other sectors added another $295m in business income for the state as a whole. The sectors most affected were the fish processing, other manufacturing, trade, business and property services, transport and finance sectors.

The southern and northern zone rock lobster fisheries, combined, contributed 48 per cent of the total turnover impact of SA commercial fisheries in 2001/02 (Figure 8).

Value added effects...

[4] Note that estimates for inland waters fisheries are not included as insufficient responses were received from licence holders in those fisheries to enable a valid analysis.

Value added is calculated as the value of output less the cost of goods and services used in producing the output. Value added is consistent with standard measures of economic activity, such as gross domestic product and gross state product. It provides an assessment of the net contribution to regional economic growth of a particular enterprise or activity.

For those commercial fisheries for which the analysis was undertaken, total value added in the South Australian economy was approximately $298m in 2001/02, approximately $155m generated by the industry directly and another $143m generated in other sectors of the economy.

As for the turnover impact, the southern and northern zone rock lobster fisheries, combined, contributed a large proportion (47 per cent) of the value added impact of SA commercial fisheries in 2001/02 (Figure 9).

Employment…

A significant number of jobs are created as a result of the flow-on business activity from fishing operations. Total direct employment in all commercial fisheries under analysis was estimated to be 2,241 in 2001/02 and flow-on business activity was estimated to generate a further 1,650 jobs in the other sectors of the state economy to give total employment of 3,891 jobs.

The marine scalefish fishery, a relatively labour intensive fishery, contributed 22 per cent of the total employment impact of SA commercial fisheries (Figure 10), despite contributing only 10 per cent of the total value added impact (Figure 9). On the other hand, the abalone fishery, while contributing only 8 per cent of the total employment impact, contributed 15 per cent of the total value added impact.

Household income...

It was estimated that personal income of approximately $75m was earned in the state's commercial fisheries in 2001/02. This was comprised of both wages by crew and drawings by owner/operators. An additional $67m was earned by wage earners in other businesses as a result of fishing industry operations. Total direct income plus indirect household income generated by commercial fishing was estimated to be around $141m in 2001/02.

The relative contribution of individual fisheries to the total household income and total turnover impacts (Figures 8 and 11) are very similar, the rock lobster and prawn fisheries, combined, contributing 68 per cent of the total.

Table 20 Economic Impacts of South Australian Commercial Fisheries, 1997/98 [a]

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish [b]	All Fisheries [c]
Turnover								
Fishing (direct) ($m)	26.9	4.1	29.2	50.9	27.7	2	16.7	157.5
All other sectors (indirect) ($m)	25.9	5.7	40.8	99.5	53	5.9	37.2	268
Total ($m)	**52.8**	**9.8**	**70**	**150.4**	**80.7**	**7.9**	**53.9**	**425.5**
Total/Direct	2	2.4	2.4	3	2.9	3.9	3.2	2.7
Total/Tonne ($)	$65,000	$36,000	$28,000	$90,000	$86,000	$17,000	$9,800	$34,911
Value Added								
Fishing (direct) ($m)	22.2	3.1	21.6	34.7	19.2	1.3	6.4	108.5
All other sectors (indirect) ($m)	13.2	2.8	20.1	50.1	26.6	2.8	18.2	133.8
Total ($m)	**35.4**	**5.9**	**41.7**	**84.8**	**45.7**	**4.1**	**24.6**	**242.2**
Total/Direct	1.6	1.9	1.9	2.4	2.4	3.2	3.8	2.2
Total/Tonne ($)	$44,000	$22,000	$17,000	$50,000	$49,000	$9,000	$4,500	$19,872
Employment								
Fishing (direct) (jobs)	128	42	210	710	312	87	750	2239
All other sectors (indirect) (jobs)	215	44	325	780	418	45	314	2141
Total (jobs)	**343**	**86**	**535**	**1,490**	**730**	**132**	**1,064**	**4380**
Total/Direct	2.7	2.1	2.5	2.1	2.3	1.5	1.4	2.0
Total/Tonne (jobs)	0.42	0.33	0.21	0.89	0.77	0.28	0.19	0.36
Household Income								
Fishing (direct) ($m)	7.8	1.6	10	20	9.6	0.9	8.5	58.4
All other sectors (indirect) ($m)	5	1.3	8.7	21.8	11.5	1.2	8.4	57.9
Total ($m)	**12.8**	**2.9**	**18.7**	**41.8**	**21.1**	**2.1**	**16.9**	**116.3**
Total/Direct	1.6	1.8	1.9	2.1	2.2	2.3	2	2.0
Total/Tonne ($)	$16,000	$11,000	$8,000	$25,000	$22,000	$5,000	$3,100	$9,542

[a] The economic impact of the South Australian commercial fisheries in 1997/98 does not include the direct and flow-on effects of estimated capital expenditure by licensees.
[b] Excludes pilchards.
[c] Excludes inland waters fisheries, pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 1999 a, b, c, d, e, f, g

Table 21 Economic Impacts of South Australian Commercial Fisheries, 1998/99 [a]

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish [b]	All Fisheries [c]
Turnover								
Fishing (direct) ($m)	27.2	5	34.6	47.2	26.7	2.2	18.3	161.2
All other sectors (indirect) ($m)	25.5	5.9	42.3	92.2	53	6.3	35.9	261.1
Total ($m)	**52.6**	**10.9**	**76.9**	**139.4**	**79.8**	**8.5**	**54.2**	**422.3**
Total/Direct	1.9	2.2	2.2	3	3	3.9	3	2.6
Total/Tonne ($)	$56,000	$33,000	$32,000	$81,000	$79,000	$17,000	$11,000	$35,523
Value Added								
Fishing (direct) ($m)	23.1	4.3	27.3	34.5	18.8	1.4	9.1	118.5
All other sectors (indirect) ($m)	12.9	2.9	21	46.2	26.6	3.1	17.8	130.5
Total ($m)	**36**	**7.2**	**48.3**	**80.7**	**45.4**	**4.5**	**26.9**	**249**
Total/Direct	1.6	1.7	1.8	2.3	2.4	3.2	3	2.1
Total/Tonne ($)	$39,000	$22,000	$20,000	$47,000	$45,000	$9,000	$5,300	$20,945
Employment								
Fishing (direct) (jobs)	128	42	210	710	304	106	719	2219
All other sectors (indirect) (jobs)	208	47	337	723	417	48	303	2083
Total (jobs)	**336**	**89**	**547**	**1,433**	**721**	**154**	**1,022**	**4302**
Total/Direct	2.6	2.1	2.6	2	2.4	1.5	1.4	1.9
Total/Tonne (jobs)	0.36	0.27	0.23	0.84	0.71	0.31	0.2	0.36
Household Income								
Fishing (direct) ($m)	7.8	2	11.9	18.5	9.2	1	9.4	59.8
All other sectors (indirect) ($m)	5.7	1.3	9	20	11.7	1.3	8.1	57.1
Total ($m)	**13.6**	**3.3**	**20.9**	**38.4**	**20.7**	**2.3**	**17.4**	**116.6**
Total/Direct	1.7	1.6	1.8	2.1	2.2	2.3	1.9	1.9
Total/Tonne ($)	$15,000	$10,000	$9,000	$22,000	$20,000	$4,600	$3,500	$9,808

[a] The economic impact of the South Australian commercial fisheries in 1998/99 does not include the direct and flow-on effects of estimated capital expenditure by licensees.
[b] Excludes pilchards.
[c] Excludes inland waters fisheries, pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 1999 i, j and 2000 a, b, c, d, e

Table 22 Economic Impacts of South Australian Commercial Fisheries, 1999/00 [a]

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish [b]	All Fisheries [c]
Turnover								
Fishing (direct) ($m)	32.4	7.6	36.1	51.2	29.9	3.1	19.9	180.2
All other sectors (indirect) ($m)	28.0	8.2	44.8	92.2	53.7	8.2	41.5	276.6
Total ($m)	**60.4**	**15.8**	**81.0**	**143.3**	**83.6**	**11.3**	**61.4**	**456.8**
Total/Direct	1.9	2.1	2.2	2.8	2.8	3.6	3.1	2.5
Total/Tonne ($)	$67,943	$39,521	$40,170	$83,473	$83,253	$24,253	$12,604	$35,573
Value Added								
Fishing (direct) ($m)	28.2	6.8	28.0	39.5	21.4	1.7	8.9	134.6
All other sectors (indirect) ($m)	14.2	3.9	22.2	46.3	26.9	4.0	20.2	137.8
Total ($m)	**42.5**	**10.7**	**50.2**	**85.8**	**48.3**	**5.7**	**29.2**	**272.3**
Total/Direct	1.5	1.6	1.8	2.2	2.3	3.4	3.3	2.0
Total/Tonne ($)	$47,762	$26,695	$24,925	$49,951	$48,139	$12,222	$5,988	$21,209
Employment								
Fishing (direct) (jobs)	128	42	210	707	304	97	677	2165
All other sectors (indirect) (jobs)	219	62	347	689	405	63	336	2121
Total (jobs)	**347**	**104**	**557**	**1396**	**709**	**160**	**1013**	**4286**
Total/Direct	2.7	2.5	2.7	2.0	2.3	1.7	1.5	2.0
Total/Tonne (jobs)	0.39	0.26	0.28	0.81	0.71	0.34	0.21	0.33
Household Income								
Fishing (direct) ($m)	9.4	3.0	12.4	20.1	9.6	1.3	8.4	64.2
All other sectors (indirect) ($m)	6.3	1.7	9.6	19.9	11.6	1.8	9.3	60.2
Total ($m)	**15.6**	**4.7**	**22.0**	**40.0**	**21.2**	**3.2**	**17.7**	**124.4**
Total/Direct	1.7	1.6	1.8	2.0	2.2	2.4	2.1	1.9
Total/Tonne ($)	$17,577	$11,874	$10,918	$23,295	$21,067	$6,795	$3,637	$9,689

[a] The economic impact of the South Australian commercial fisheries in 1999/00 includes the direct and flow-on effects of estimated capital expenditure by licensees.

[b] Excludes pilchards.

[c] Excludes inland waters fisheries, pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 2001 a, b, c, d, e, f, g, h

Table 23 Economic Impacts of South Australian Commercial Fisheries, 2000/01 [a]

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish [b]	All Fisheries [c]
Turnover								
Fishing (direct) ($m)	40.0	6.7	42.2	54.7	28.0	4.4	21.0	197.0
All other sectors (indirect) ($m)	30.3	7.7	50.8	97.8	55.0	9.9	42.7	294.1
Total ($m)	**70.3**	**14.3**	**93.0**	**152.5**	**83.0**	**14.3**	**63.8**	**491.1**
Total/Direct	1.8	2.1	2.2	2.8	3.0	3.3	3.0	2.5
Total/Tonne ($)	$81,054	$37,334	$38,974	$88,863	$98,097	$22,172	$12,131	$40,457
Value Added								
Fishing (direct) ($m)	36.2	5.7	35.0	40.6	17.9	2.9	10.9	149.2
All other sectors (indirect) ($m)	15.2	3.7	24.1	47.0	26.3	4.6	20.5	141.3
Total ($m)	**51.4**	**9.4**	**59.1**	**87.6**	**44.2**	**7.5**	**31.4**	**290.5**
Total/Direct	1.4	1.6	1.7	2.2	2.5	2.6	2.9	1.9
Total/Tonne ($)	$59,255	$24,463	$24,734	$51,037	$52,218	$11,627	$5,977	$23,926
Employment								
Fishing (direct) (jobs)	151	42	260	674	299	84	670	2179
All other sectors (indirect) (jobs)	176	43	286	553	313	55	254	1681
Total (jobs)	**327**	**85**	**546**	**1227**	**612**	**139**	**924**	**3860**
Total/Direct	2.2	2.0	2.1	1.8	2.0	1.7	1.4	1.8
Total/Tonne (jobs)	0.38	0.22	0.23	0.72	0.72	0.22	0.18	0.32
Household Income								
Fishing (direct) ($m)	11.3	2.6	16.0	19.3	10.7	1.8	10.0	71.8
All other sectors (indirect) ($m)	7.0	1.7	11.1	22.1	12.4	2.2	9.8	66.2
Total ($m)	**18.3**	**4.3**	**27.1**	**41.5**	**23.0**	**4.1**	**19.8**	**138.0**
Total/Direct	1.6	1.6	1.7	2.1	2.2	2.2	2.0	1.9
Total/Tonne ($)	$21,062	$11,225	$11,345	$24,157	$27,232	$6,299	$3,766	$11,367

[a] The economic impact of the South Australian commercial fisheries in 2000/01 includes the direct and flow-on effects of estimated capital expenditure by licensees.
[b] Excludes pilchards.
[c] Excludes inland waters fisheries, pilchards as well as the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 2002 a, b, c, d, e, f, g, h

Table 24 Economic Impacts of South Australian Commercial Fisheries, 2001/02 [a]

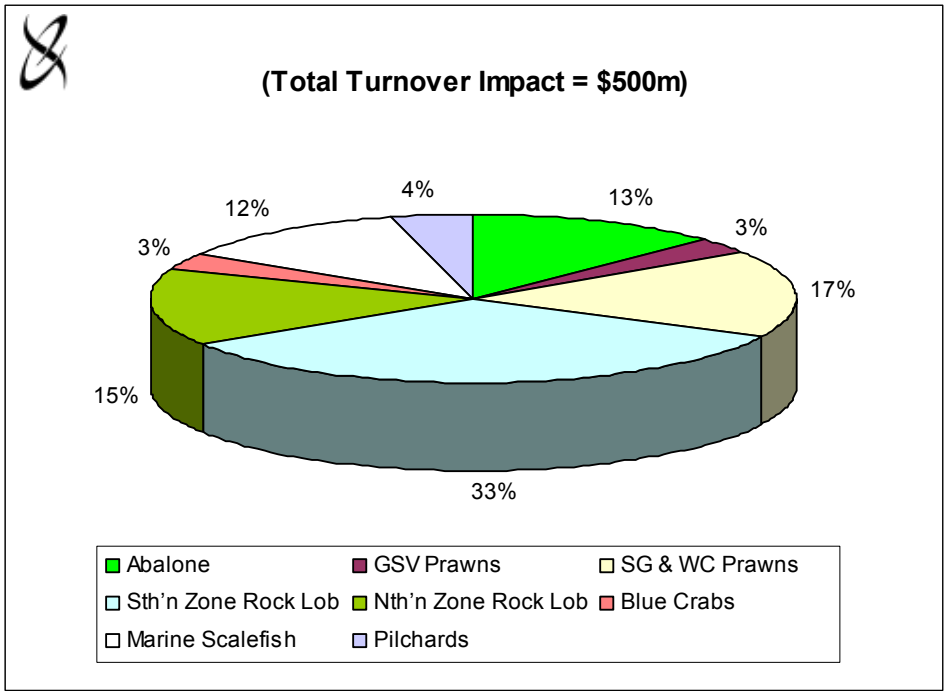
	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish	Pilchards	All Fisheries [b]
Turnover									
Fishing (direct) ($m)	34.8	5.9	38.1	65.7	26.2	4.8	19.0	10.1	204.6
All other sectors (indirect) ($m)	28.8	8.2	47.5	100.9	48.7	9.9	40.5	11.0	295.4
Total ($m)	**63.5**	**14.1**	**85.6**	**166.6**	**74.9**	**14.8**	**59.5**	**21.1**	**500.0**
Total/Direct	1.8	2.4	2.2	2.5	2.9	3.1	3.1	2.1	2.4
Total/Tonne ($)	$74,731	$43,668	$40,771	$97,019	$110,909	$23,101	$12,600	$1,616	$21,531
Value Added									
Fishing (direct) ($m)	30.8	4.1	31.2	52.3	17.0	3.4	9.3	7.5	155.6
All other sectors (indirect) ($m)	14.4	3.9	22.6	48.8	23.4	4.7	19.4	5.4	142.6
Total ($m)	**45.2**	**8.0**	**53.9**	**101.2**	**40.3**	**8.0**	**28.8**	**12.8**	**298.2**
Total/Direct	1.5	1.9	1.7	1.9	2.4	2.4	3.1	1.7	1.9
Total/Tonne ($)	$53,133	$24,988	$25,663	$58,922	$59,777	$12,575	$6,096	$982	$12,844
Employment									
Fishing (direct) (jobs)	151	62	260	667	299	82	637	84	2,241
All other sectors (indirect) (jobs)	164	48	259	556	271	54	235	64	1,650
Total (jobs)	**315**	**110**	**518**	**1,223**	**570**	**136**	**872**	**148**	**3,891**
Total/Direct	2.1	1.8	2.0	1.8	1.9	1.7	1.4	1.8	1.7
Total/Tonne (jobs)	0.37	0.34	0.25	0.71	0.84	0.21	0.18	0.01	0.17
Household Income									
Fishing (direct) ($m)	9.8	1.9	14.5	23.2	10.0	2.0	9.7	3.6	74.6
All other sectors (indirect) ($m)	6.7	1.9	10.4	22.8	11.0	2.3	9.3	2.5	66.8
Total ($m)	**16.5**	**3.8**	**24.9**	**46.0**	**21.0**	**4.2**	**19.0**	**6.1**	**141.4**
Total/Direct	1.7	2.0	1.7	2.0	2.1	2.1	2.0	1.7	1.9
Total/Tonne ($)	$19,406	$11,764	$11,849	$26,795	$31,044	$6,613	$4,025	$468	$6,092

[a] The economic impact of the South Australian commercial fisheries in 2001/02 includes the direct and flow-on effects of estimated capital expenditure by licensees.

[b] Excludes inland waters fisheries and the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

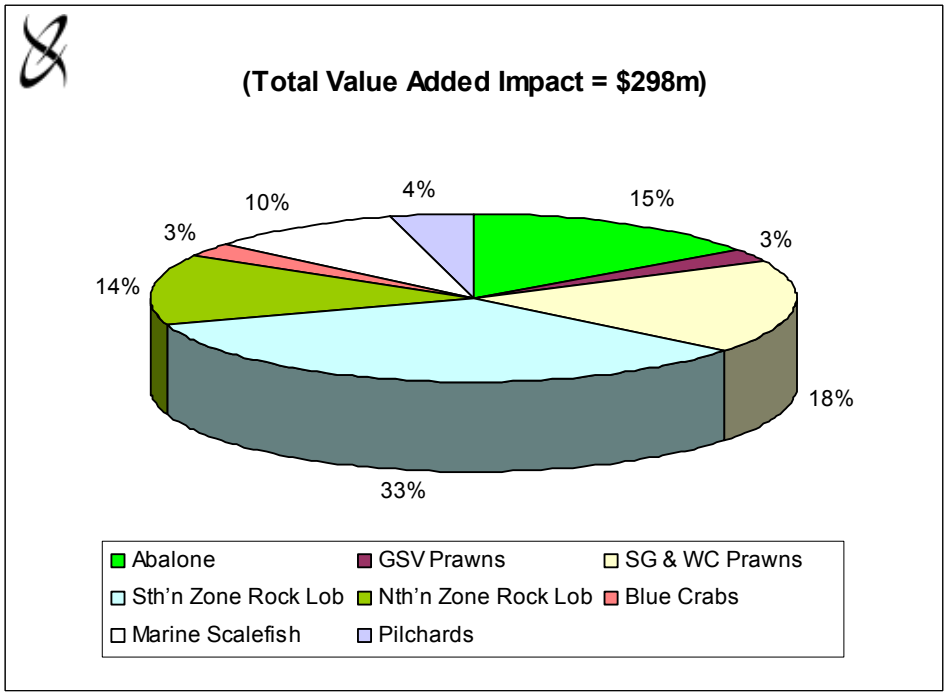
Source: EconSearch 2003 a, b, c, d, e, f, g, h, i

Figure 8 Contribution to Total Turnover Impact of South Australian Commercial Fisheries, 2001/02



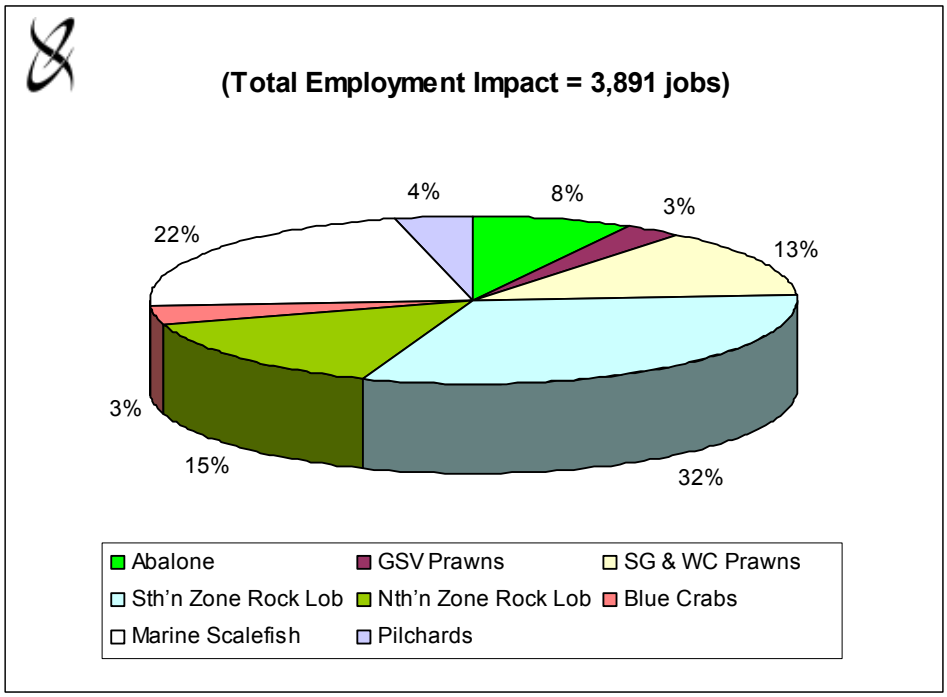
Source: Table 24.

Figure 9 Contribution to Total Value Added Impact of South Australian Commercial Fisheries, 2001/02



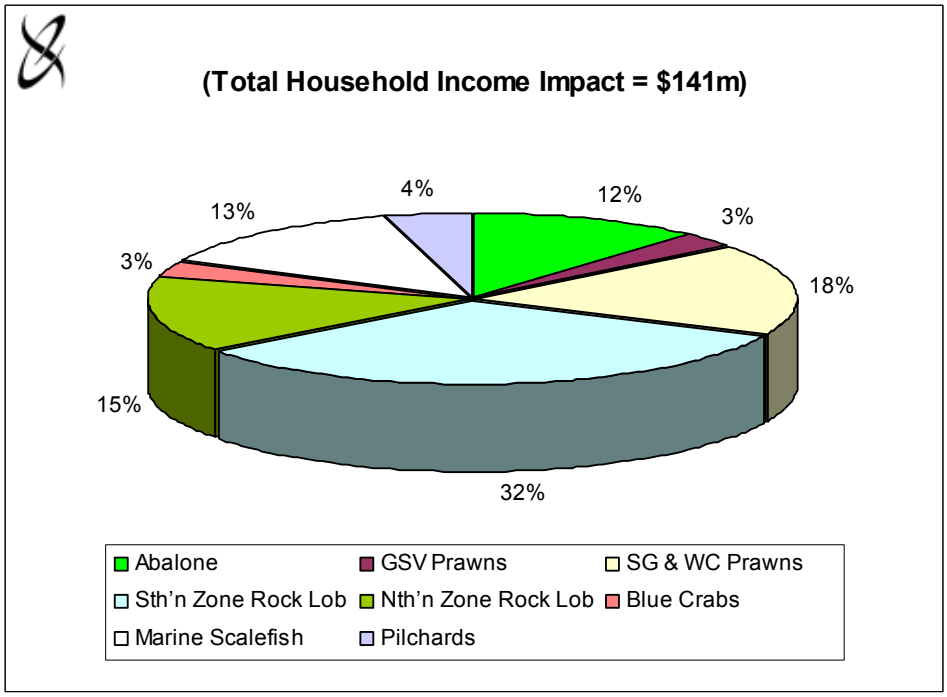
Source: Table 24.

Figure 10 Contribution to Total Employment Impact of South Australian Commercial Fisheries, 2001/02



Source: Table 24.

Figure 11 Contribution to Total Household Income Impact of South Australian Commercial Fisheries, 2001/02



Source: Table 24.

3.6 Economic Rent

Economic rent[5] is defined as the difference between the price of a good produced using a natural resource and the unit costs of turning that natural resource into the good. In this case the natural resource is the abalone fishery and the good produced is the landed abalone.

The unit costs or long term costs all need to be covered if the licence holder is to remain in the fishery. These long-term costs include direct operating costs such as fuel, labour (including the opportunity cost of a self employed fisher's own labour), bait, overheads such as administration and licences and the cost of capital invested in the boat and gear (excluding licence). Capital cost includes depreciation and the opportunity cost of the capital applied to the fishery. The opportunity cost is equivalent to what the fisher's investment could have earned in the next best alternative use.

Determining the opportunity cost of capital involves an assessment of the degree of financial risk involved in the activity. For a risk-free operation, an appropriate opportunity cost of capital might be the long-term real rate of return on government bonds. The greater the risks involved, the greater is the necessary return on capital to justify the investment in that particular activity. For this analysis the long term (10 year) real rate of return on government (treasury) bonds of 5 per cent has been used and a risk premium of 5 per cent has been applied.

Given the relatively high-risk nature of the industry (weak property rights therefore short time horizons, exposure to exchange rate fluctuations, general price volatility, problems of resource sustainability and political risk in export countries) an argument could be made for a higher required rate of return.

What remains after the value of these inputs (labour, capital, materials, services) has been netted out, is the value of the natural resource itself. The economic rent generated in the commercial fisheries of South Australia in 1997/98 was estimated to be approximately $22.3 million, excluding the pilchard fishery (Table 25), increasing to $40.4 million in 2001/02, including the pilchard fishery (Table 29).

In 2001/02 the abalone, Spencer Gulf and West Coast prawn and southern zone rock lobster fisheries all generated significant economic rents (Figure 12).

[5] Economic rent is comprised of three types of rent: entrepreneurial rent, quasi-rent and resource rent. As in any business some operators are more skilful than others and will therefore earn more profit. These profits, which are one component of economic rent, are *entrepreneurial rents*. In the short-term fishers may earn large surpluses over costs, which may provide prima facie evidence of substantial resource rents. However, there are some circumstances where such surpluses can occur but they are not true rents. These are referred to as *quasi-rents*. One example is where a fishery is developing or recovering and there may be under-investment in the fishery. Another example is where there is a short-term but unsustainable increase in price due to, for example, exchange rate fluctuations. However, some profits will be obtained because the natural resource being used (i.e. the fishery) has a value. These profits are described as *resource rents* and are also a component of economic rent.

Table 25 Economic Rent in South Australian Commercial Fisheries, 1997/98 ($m)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish	All Fisheries [a]
Gross Income	26.9	4.1	29.2	50.9	27.7	2.2	16.7	157.6
Less Labour	7.8	1.6	10.0	19.5	9.7	1.0	8.5	58.1
Less Materials & Services	4.6	0.8	7.4	13.9	8.3	0.8	10.9	46.6
Less Depreciation	0.6	0.5	2.6	4.9	3.4	0.2	3.8	15.9
Less Opportunity Cost of Capital (@10%)	0.4	0.1	3.7	4.3	2.9	0.1	3.0	14.7
Economic Rent	**13.5**	**1.0**	**5.4**	**8.4**	**3.4**	**0.1**	**-9.5**	**22.3**

[a] Excludes pilchards, inland waters fisheries and the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 1999 a, b, c, d, e, f, g

Table 26 Economic Rent in South Australian Commercial Fisheries, 1998/99 ($m)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish	All Fisheries [a]
Gross Income	27.2	5.0	34.6	47.2	26.7	2.2	18.3	161.2
Less Labour	7.8	2.0	11.9	18.1	9.4	1.0	7.8	58.0
Less Materials & Services	3.9	0.8	7.1	12.1	7.6	0.8	9.9	42.2
Less Depreciation	0.6	0.5	3.0	4.9	3.6	0.2	3.7	16.5
Less Opportunity Cost of Capital (@10%)	0.4	0.1	4.2	4.3	3.2	0.1	2.9	15.3
Economic Rent	**14.3**	**1.6**	**8.5**	**7.8**	**2.9**	**0.2**	**-6.1**	**29.2**

[a] Excludes pilchards, inland waters fisheries and the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 1999 i, j and 2000 a, b, c, d, e

Table 27 Economic Rent in South Australian Commercial Fisheries, 1999/00 ($m)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish	All Fisheries [a]
Gross Income	32.4	7.6	36.1	51.2	29.9	2.1	19.9	179.2
Less Labour	9.4	3.0	12.4	19.6	10.5	1.0	7.9	63.7
Less Materials & Services	3.9	0.9	7.9	11.1	8.9	0.8	10.8	44.3
Less Depreciation	0.7	0.5	3.2	5.0	4.1	0.2	3.7	17.2
Less Opportunity Cost of Capital (@10%)	0.4	0.1	4.6	4.4	3.6	0.1	2.9	16.1
Economic Rent	**18.1**	**3.0**	**8.0**	**11.2**	**2.9**	**0.1**	**-5.4**	**37.8**

[a] Excludes pilchards, inland waters fisheries and the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 2001 a, b, c, d, e, f, g, h

Table 28 Economic Rent in South Australian Commercial Fisheries, 2000/01 ($m)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish	All Fisheries [a]
Gross Income	40.0	6.7	46.0	54.7	27.7	3.1	21.0	199.2
Less Labour	11.3	2.6	17.5	19.3	10.7	0.0	9.5	71.0
Less Materials & Services	3.9	0.9	7.7	13.5	9.6	0.0	10.2	45.9
Less Depreciation	1.2	0.5	4.5	7.1	3.9	0.0	3.3	20.7
Less Opportunity Cost of Capital (@10%)	0.6	0.2	4.6	5.2	3.8	0.0	2.7	16.9
Economic Rent	**23.1**	**2.4**	**11.7**	**9.6**	**-0.4**	**0.0**	**-4.7**	**44.7**

[a] Excludes pilchards, inland waters fisheries and the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 2002 a, b, c, d, e, f, g, h

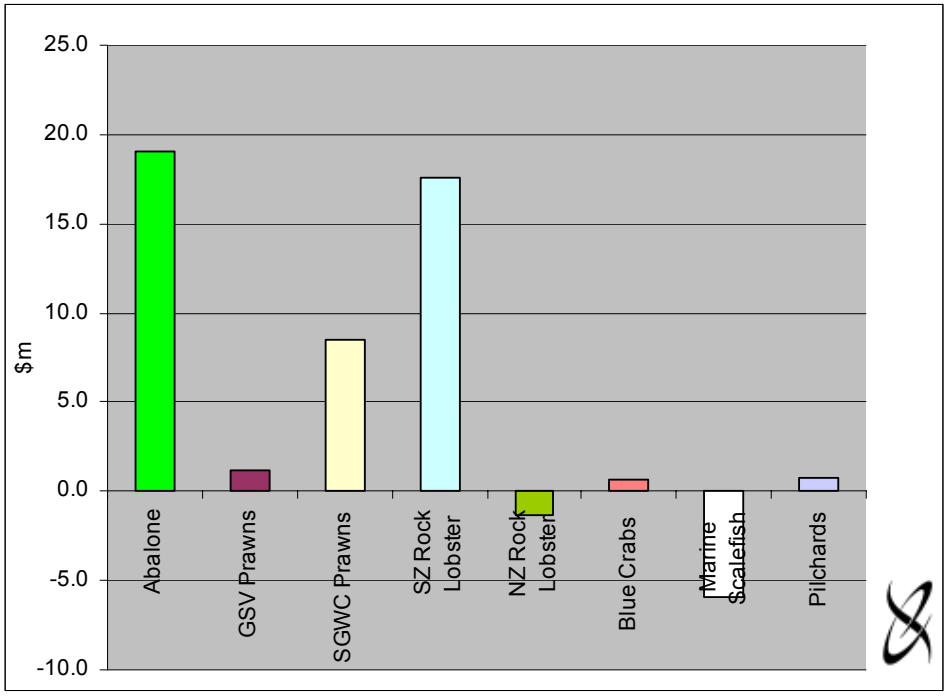
Table 29 Economic Rent in South Australian Commercial Fisheries, 2001/02 ($m)

	Abalone	GSV Prawns	SG & WC Prawns	Sth'n Zone Rock Lob	Nth'n Zone Rock Lob	Blue Crabs	Marine Scalefish	Pilchards	All Fisheries [a]
Gross Income	34.8	5.9	41.5	65.7	26.2	3.0	19.0	8.5	204.6
Less Labour	9.8	1.9	15.8	23.2	10.1	1.3	9.3	3.0	74.4
Less Materials & Services	4.0	1.7	7.4	12.6	8.9	0.8	9.8	2.6	47.9
Less Depreciation	1.3	0.8	4.9	7.1	4.4	0.2	3.2	1.1	23.0
Less Opportunity Cost of Capital (@10%)	0.6	0.3	5.0	5.1	4.2	0.1	2.6	1.0	19.0
Economic Rent	**19.1**	**1.2**	**8.4**	**17.6**	**-1.4**	**0.6**	**-5.9**	**0.8**	**40.4**

[a] Excludes inland waters fisheries and the Commonwealth managed fisheries: south east non-trawl, tuna, deep water trawl.

Source: EconSearch 2003 a, b, c, d, e, f, g, h, i

Figure 12 Economic Rent in South Australian Commercial Fisheries, 2001/02



Source: Table 29.

4. References

ABS 2003, *Australian Economic Indicators*, Cat. No. 1350.0, Australian Bureau of Statistics (ABS).

Baker, D. and B Pierce 1998, *Reassessment of the Gross Economic Value of the South Australian Inland Fisheries Harvest*, SARDI Aquatic Sciences

Brown, D. 1997, *Australian Fisheries Surveys Report: Physical and financial performance in selected Australian Fisheries 1994-95 to 1996-97*, ABARE Report, Canberra.

EconSearch 1999a, *Economic Indicators for the South Australian Abalone Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 1999b, *Economic Indicators for the SA Southern Zone Rock Lobster Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 1999c, *Economic Indicators for the SA Northern Zone Rock Lobster Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 1999d, *Economic Indicators for the SA Marine Scalefish Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 1999e, *Economic Indicators for the Spencer Gulf and West Coast Prawn Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, March.

EconSearch 1999f, *Economic Indicators for the Gulf St. Vincent Prawn Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, April.

EconSearch 1999g, *Economic Indicators for the South Australian Blue Crab Fishery 1997/98*, report prepared for Primary Industries and Resources South Australia, May.

EconSearch 1999h, *Economic Indicators for the SA Inland Waters Fisheries 1997/98*, report prepared for Primary Industries and Resources South Australia, July.

EconSearch 1999i, *Economic Indicators for the SA Northern Zone Rock Lobster Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, December.

EconSearch 1999j, *Economic Indicators for the SA Southern Zone Rock Lobster Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, December

EconSearch 2000a, *Economic Indicators for the South Australian Abalone Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 2000b, *Economic Indicators for the SA Marine Scalefish Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, April.

EconSearch 2000c, *Economic Indicators for the Spencer Gulf and West Coast Prawn Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 2000d, *Economic Indicators for the Gulf St. Vincent Prawn Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 2000e, *Economic Indicators for the South Australian Blue Crab Fishery 1998/99*, report prepared for Primary Industries and Resources South Australia, April.

EconSearch 2000f, *Economic Indicators for the SA Inland Waters Fisheries 1998/99*, report prepared for Primary Industries and Resources South Australia, June.

EconSearch 2001a, *Economic Indicators for the SA Northern Zone Rock Lobster Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, January.

EconSearch 2001b, *Economic Indicators for the SA Southern Zone Rock Lobster Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, January.

EconSearch 2001c, *Economic Indicators for the South Australian Abalone Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, February.

EconSearch 2001d, *Economic Indicators for the Spencer Gulf and West Coast Prawn Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, May.

EconSearch 2001e, *Economic Indicators for the Gulf St. Vincent Prawn Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, May.

EconSearch 2001f, *Economic Indicators for the South Australian Blue Crab Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, May.

EconSearch 2001g, *Economic Indicators for the SA Marine Scalefish Fishery 1999/00*, report prepared for Primary Industries and Resources South Australia, June.

EconSearch 2001h, *Economic Indicators for the SA Inland Waters Fisheries 1999/00*, report prepared for Primary Industries and Resources South Australia, June.

EconSearch 2002a, *Economic Indicators for the SA Northern Zone Rock Lobster Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, May.

EconSearch 2002b, *Economic Indicators for the SA Southern Zone Rock Lobster Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, May.

EconSearch 2002c, *Economic Indicators for the Spencer Gulf and West Coast Prawn Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, June.

EconSearch 2002d, *Economic Indicators for the South Australian Abalone Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, July.

EconSearch 2002e, *Economic Indicators for the Gulf St. Vincent Prawn Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, September.

EconSearch 2002f, *Economic Indicators for the South Australian Blue Crab Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, September.

EconSearch 2002g, *Economic Indicators for the SA Marine Scalefish Fishery 2000/01*, report prepared for Primary Industries and Resources South Australia, September.

EconSearch 2002h, *Economic Indicators for the SA Inland Waters Fisheries 2000/01*, report prepared for Primary Industries and Resources South Australia, September.

EconSearch 2003a, *Economic Indicators for the SA Northern Zone Rock Lobster Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, March.

EconSearch 2003b, *Economic Indicators for the SA Southern Zone Rock Lobster Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, March.

EconSearch 2003d, *Economic Indicators for the Spencer Gulf and West Coast Prawn Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, March.

EconSearch 2003c, *Economic Indicators for the South Australian Abalone Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, July.

EconSearch 2003e, *Economic Indicators for the Gulf St. Vincent Prawn Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, September.

EconSearch 2003f, *Economic Indicators for the South Australian Blue Crab Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, July.

EconSearch 2003g, *Economic Indicators for the SA Marine Scalefish Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, July.

EconSearch 2003h, *Economic Indicators for the SA Inland Waters Fisheries 2001/02*, report prepared for Primary Industries and Resources South Australia, July.

EconSearch 2003i, *Economic Indicators for the SA Pilchard Fishery 2001/02*, report prepared for Primary Industries and Resources South Australia, October.

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