

2 THE NATURE OF AUSTRALIAN FISHERIES

2.1 Introduction

Australia is an island nation with a vast coastline and much oceanic territory and, although recreational fishing is Australia's most popular sporting pastime, Australia is not a major commercial fishing nation by world standards.

There are two major reasons for this apparent contradiction. Firstly, 86 per cent of the Australian population lives in coastal regions¹ and has easy access to estuaries, beaches and the ocean for recreational purposes. Secondly, the relatively warm seas surrounding Australia contain fewer nutrients than the colder seas found in other parts of the world and are, as a result, not as fertile.²

A national survey of participation in recreational fishing completed in 1984 reported that an estimated 4.5 million people had fished recreationally at least once during the previous year³, making recreational fishing Australia's most popular pastime. Despite the significance of the recreational fishing effort, little is known about the size or composition of the recreational catch.

In contrast, much is known in relation to the commercial catch. According to Shelley and Gary Underwood:

Australia's annual catch is ranked 55th in the world. This represents just over 200,000 tonnes of fish. This is small compared to New Zealand's catch of 500,000 tonnes and Japan's 10 to 12 million tonnes.⁴

¹ Readers Digest (1994). *Atlas of Australia*, Readers Digest (Australia), Surry Hills, p 49

² T C Roughley (1951). *Fish and Fisheries of Australia*, Angus and Robertson, Sydney, pp 163-164

³ P A Management Consultants (1984). *National Survey of Participation in Recreational Fishing*, Report No 1, Melbourne, p 6

⁴ Shelley and Gary Underwood (1995). *Fishing*, Cardigan Street Publishers, Melbourne, p 28

Commercial fishing differs from most primary industries due to its heavy reliance on wild stocks and the difficulties associated with their harvest and management. Commercial fishing takes place throughout the Australian Fishing Zone (AFZ), an area of about nine million square kilometres that extends 200 nautical miles from the shore.

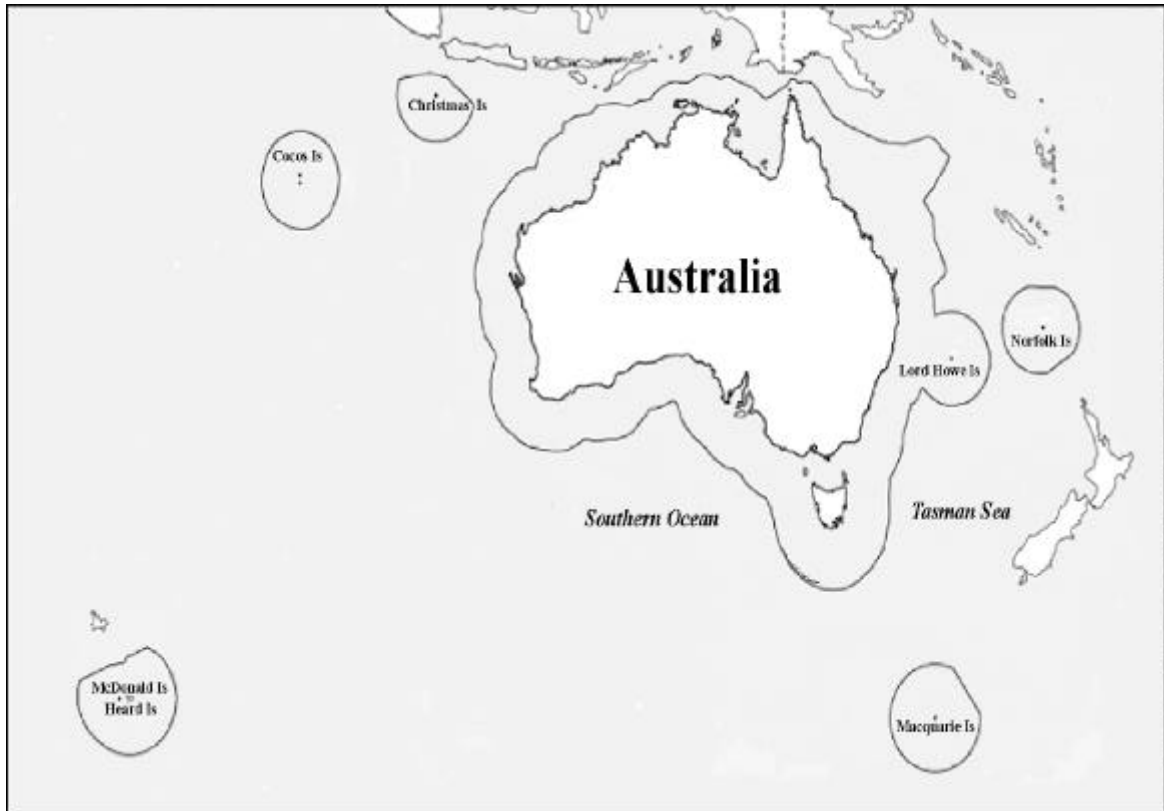
The States are responsible for the management of inland, estuarine and coastal fisheries out to three nautical miles from shore. The Commonwealth is responsible for fisheries management in waters between three nautical miles from shore and the edge of the AFZ.

Australia's fisheries are defined by a combination of the species caught, the fishing methods used and the geographical area of operation. About 70 separate fisheries were defined in Commonwealth and State Government legislation in Australia in 1991.

Currently the States manage wild fisheries worth about 58 per cent of the total value of fisheries production in Australia and aquaculture industries worth a further 18 per cent. ⁵

⁵ P J Kailola, M J Williams, P C Stewart, R E Reichelt, A McNee and C Grieve (1993). *Australian Fisheries Resources*, Bureau of Resource Sciences and the Fisheries Research and Development Corporation, Canberra, p 6

Figure 2.1 - Limits of the Australian Fishing Zone ⁶

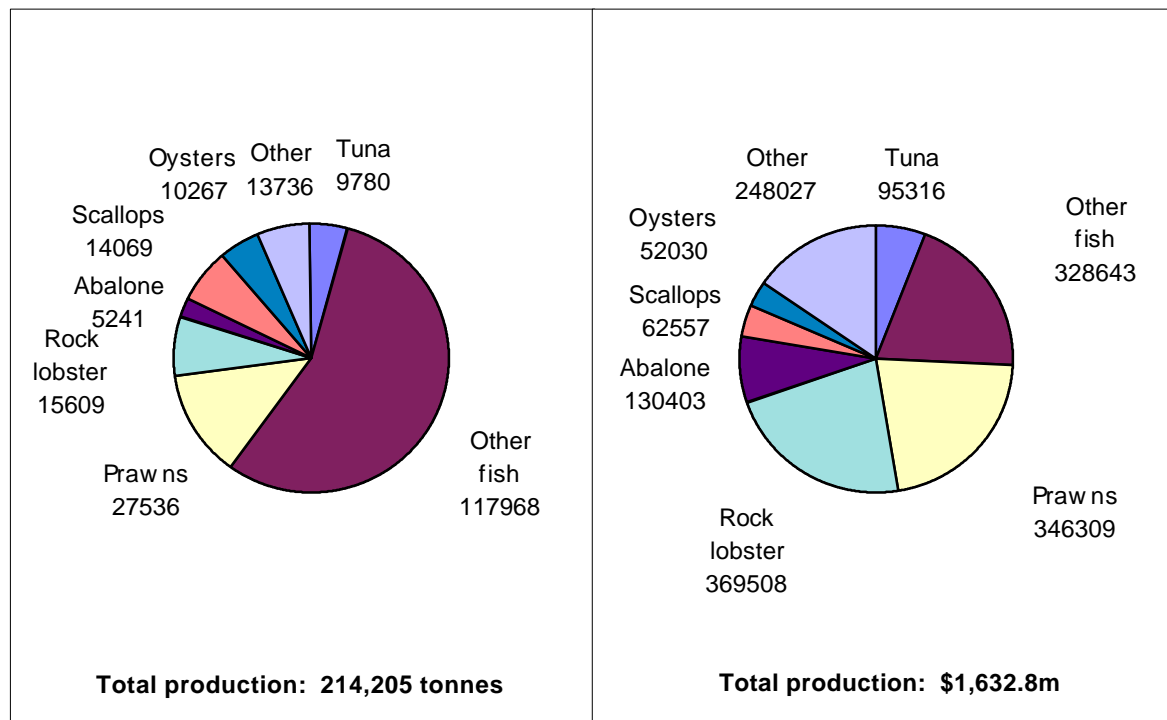


Although the volume of fisheries production in Australia is relatively low, the commercial fishing industry is ranked fifth in value amongst Australia's primary food and fibre industries after wool, beef, wheat and dairy products. The value of Australian commercial wild fishery and aquacultural production has exceeded \$1 billion each year since 1988 and was estimated at \$1.8 billion in 1995-96. This high value is largely the result of the high proportion of highly priced shellfish species such as abalone, scallops, penaeid prawns and rock lobsters.

Figure 2.2 shows that in 1995-96 these shellfish species provided over 60 per cent of the total value of production.

⁶ P J Kailola et al (1993). *Australian Fisheries Resources*, p 6

**Figure 2.2 - Australian Fisheries Production by Species
1995-96 ⁷**

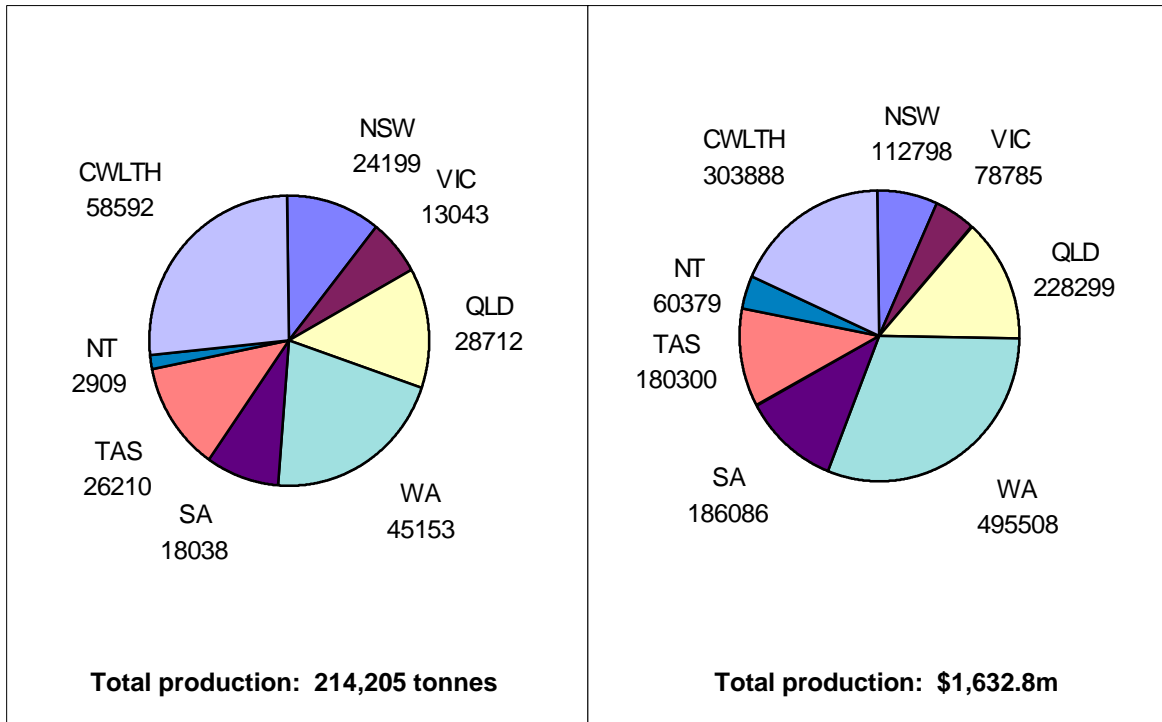


Fisheries production varies markedly between states. Figure 2.3 below illustrates the dominance of the Western Australian and Commonwealth fisheries in total Australian fisheries production.

Figure 2.3 - Australian Fisheries Production by State

⁷ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, Commonwealth of Australia, Canberra, p 10

1995-96⁸



2.2 The Commonwealth Fishery

Commonwealth fisheries are administered under the *Fisheries Management Act 1991*. The Australian Fisheries Management Authority (AFMA) has responsibility for managing Commonwealth fisheries.

Of the Commonwealth's 13 fisheries, the largest in terms of value of production in 1995-96 are the northern prawn (\$114 million), south east trawl (\$50 million), southern bluefin tuna (\$47 million), Torres Strait (\$27 million), southern shark (\$17 million) and east coast longline and minor line (\$17 million) fisheries.

⁸ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 10

The value of other Commonwealth fisheries in 1995-96 was approximately \$30 million.⁹

Figure 2.4 - Commonwealth Fisheries Production by Tonnage and Value 1995-96¹⁰

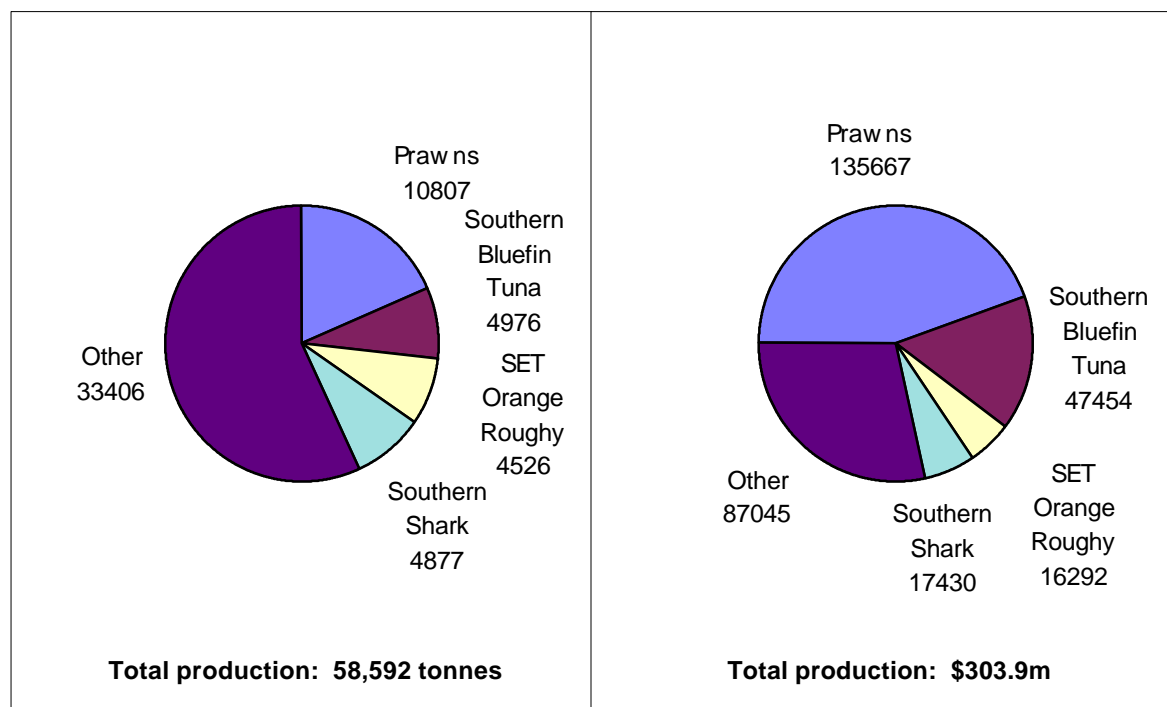
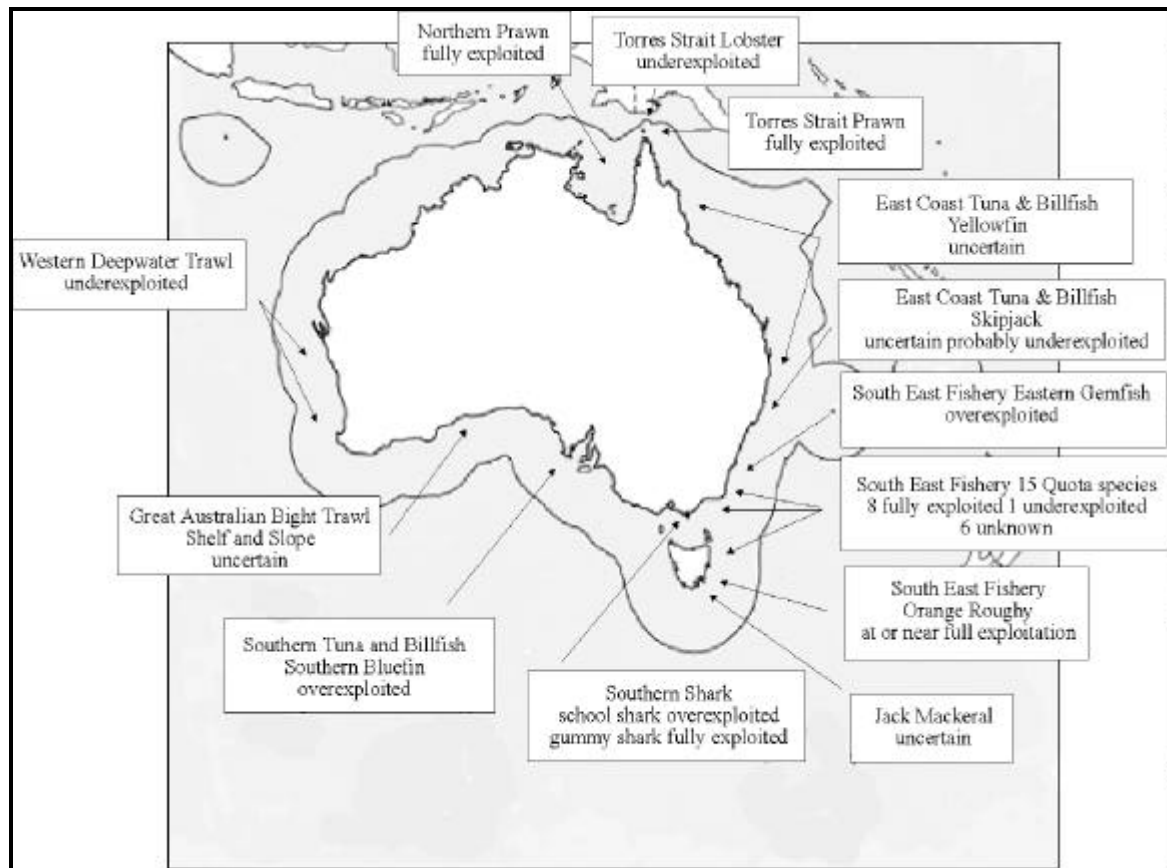


Figure 2.5 summarises the status of species or species groups which are taken commercially in Commonwealth-managed fisheries and indicates that four species (or species groups) are overfished, eleven are fully fished, six are underfished and ten are uncertain or unknown.

⁹ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, pp 18-19

¹⁰ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, pp 18-19

**Figure 2.5 - The Status of Commonwealth Fisheries in 1993
(including jointly managed commercial fisheries) ¹¹**



2.3 The New South Wales Fishery

New South Wales' fisheries are administered under the *Fisheries Management Act 1994*. Chapter Three examines this Act in detail. NSW Fisheries is the responsible authority for fisheries management in the State.

¹¹ Adapted from, K McLoughlin, D Stapes, and M Maliel, (1994). *Fishery Status Reports 1993 - Resource Assessments of Australian Commonwealth Fisheries*, Bureau of Resource Sciences, Canberra

A recent survey of angling suggests that approximately 30 per cent of the NSW goes fishing at least once a year.¹² n

13

th of the State's coastline.

Freshwater salmonid angling o

New England areas, while native freshwater fishing occurs throughout the

Although the licensing of freshwater angling ceased in 1988, some inland he re-introduction of such licences, prov that the proceeds are used to fund restocking and inland fisherie management.

There are curr

licensed fishing vessels. Approximately 200 species of fish and invertebrates

The three species with the highest production are:

-
- the eastern king prawn and the school prawn.

The Sydney rock oyster is the most important aquaculture species in NSW in of production and value, with 5326 tonnes, worth

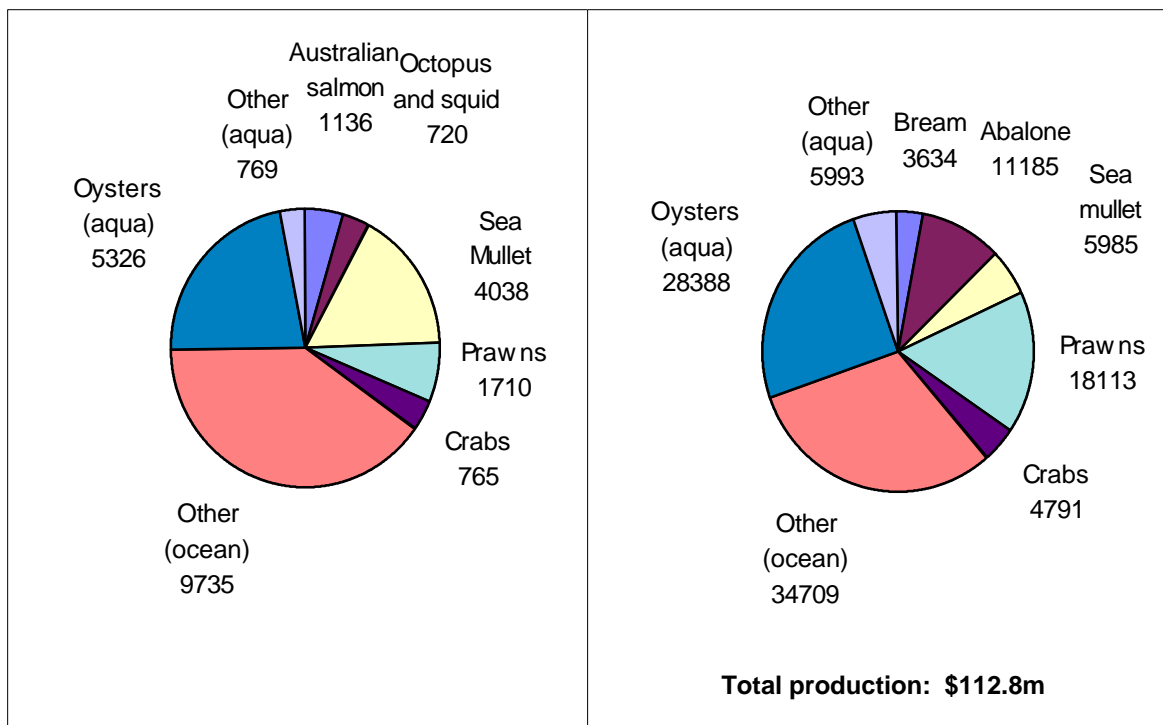
Figure 2.6 shows NSW commercial fisheries production during 1995-96.

¹² J Pepperell (1996). *Recreational F*

Survey

¹³ Submission 42, NSW Fisheries, p 9

Figure 2.6 - NSW Fisheries Production Tonnage and Value 1995-96 ¹⁴



The majority of the commercial catch is taken from marine waters (79 per cent), followed by estuarine waters (20 per cent) and inland waters (1 per cent).¹⁵ The main fishing methods employed throughout the State are net, trap and line.

¹⁴ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, Commonwealth of Australia, Canberra, p 11

¹⁵ Submission 42, NSW Fisheries, p 7

2.4 The Nature and Management of Other Australian Fisheries

2.4.1 Western Australia

The Fisheries Department of Western Australia is responsible for the administration of the State's fisheries under three state Acts of Parliament:

- the *Fish Resources Management Act 1994*,
- the *Fisheries Adjustment Schemes Act 1987* and
- the *Pearling Act 1990*.

Most of Western Australia's population is distributed close to the coastline, with over 70 per cent living within the Perth region. This has led to a traditionally high participation rate in aquatic-based recreation. According to a 1987 Australian Bureau of Statistics survey, over 345,000 Western Australians enjoyed fishing for recreation on a regular basis each year at that time.¹⁶

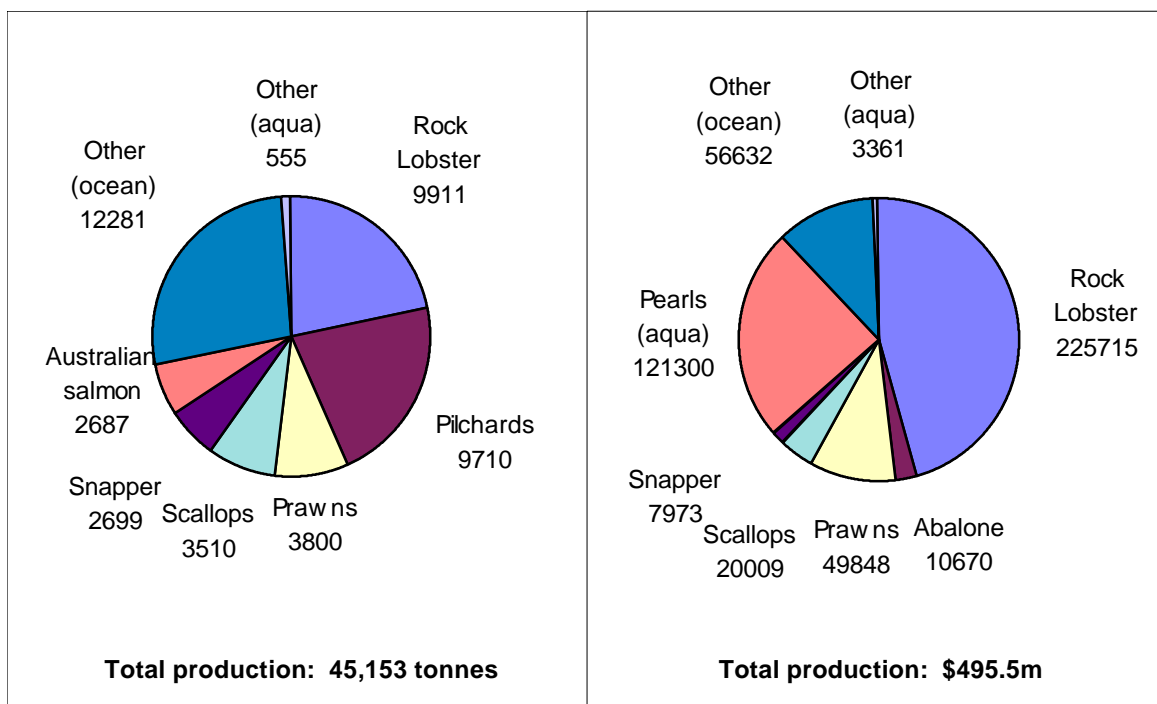
In recent years participation in recreational fishing has steadily increased, placing greater pressure on inshore aquatic resources. Annual recreational licences are required for a number of fisheries and raise a net revenue of \$1.1 million per annum. Revenue derived from recreational licences is administered by the Recreational Fishing Advisory Committee and is spent directly on fisheries management.

Recreational managers are assisted by Volunteer Fishing Liaison Officers (VFLOs). This programme has been found to be successful in providing a link between management and the recreational fishing community.

Western Australia has the greatest commercial fisheries production of any Australian state, in terms of both quantity and value. Figure 2.7 illustrates the great contribution to the value of the State's fisheries production made by rock lobster, most of which is exported.

¹⁶ Australian Bureau of Statistics Survey (1987), p 27

Figure 2.7 - Western Australian Fisheries Production Tonnage and Value 1995-96¹⁷



Other major Western Australian fisheries in terms of value include the cultured pearl fishery centred around Broome, which contributes 25 per cent of the total value of production, and prawns (10 per cent). The entire fish catch contributed less than 10 per cent to the total value of production in 1995-96.

2.4.2 Queensland

Queensland's fisheries are administered under the *Fisheries Act 1994*. The Act established a Policy Council and the Queensland Fisheries Management Authority (QFMA), with a management structure similar to the Commonwealth model.

¹⁷ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 14

The ultimate decision-making body within the QFMA is the Board of Directors, which includes an Executive Chairman and six other members chosen for their expertise in fishing, public administration, fisheries science, natural resource management, industrial affairs, commerce, economics or financial management.

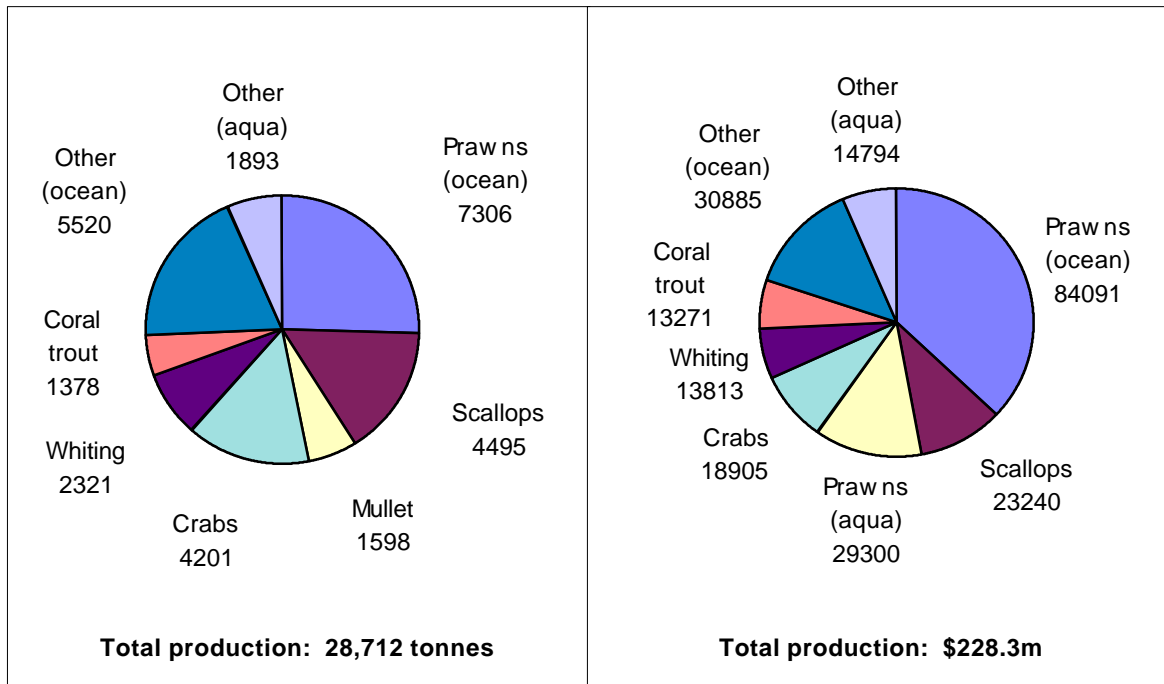
A wide variety of recreational angling is undertaken in Queensland with fisheries ranging across marine, estuarine, tropical freshwater and warm freshwater habitats.

The introduction of a general recreational licence has been rejected by the Government in favour of a boat levy of \$12 added to boat registration fees. This levy raises approximately \$1.4 million per annum and is used to fund marine and freshwater recreational fisheries management.

The Great Barrier Marine Park Authority works in conjunction with the QFMA to manage the growing number of recreational fishers that gain access to the reef in charter boats through a logbook programme.

Queensland's commercial fisheries production is ranked second in Australia, in terms of both quantity and value. The fishery is dominated by the ocean haul prawn trawl fishery which contributes 37 per cent of the total value of production.

Figure 2.8 - Queensland Fisheries Production Tonnage and Value 1995-96 ¹⁸



Total fish landings contributed 23 per cent of the value of fisheries production in 1995-96 and the growing aquaculture industry contributed a further 19 per cent.

2.4.3 South Australia

South Australian marine resources are administered under the *Fisheries Act 1982* and managed by Primary Industries South Australia (PISA). There are an estimated 400,000 recreational fishers in South Australia. The value of this activity has been estimated at approximately \$285 million per annum.¹⁹

¹⁸ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 13

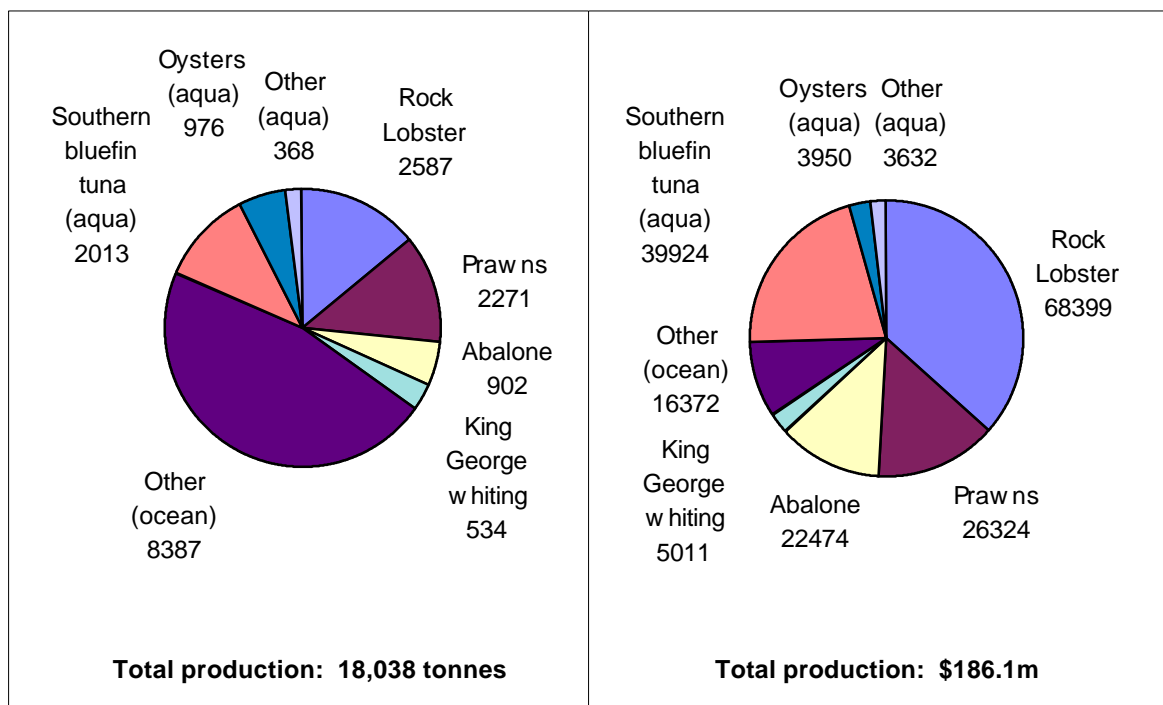
¹⁹ Primary Industries South Australia Home Page www.pi.sa.gov.au

With the bulk of the population concentrated in the south east of the State and freshwater angling generally limited to the Murray River, most recreational fishing activity occurs in the Gulf of St Vincent, the Spencer Gulf and adjacent waters.

The South Australian fishcare programme is considered to be successful in providing a link between recreational fishers, commercial fishers and management. The South Australian commercial fishing industry is characterised by high value species, with rock lobster, abalone and prawns making up 63 per cent of the total value of production.

Figure 2.9 shows the quantity and value of South Australian fisheries production in 1995-96.

Figure 2.9 - South Australian Fisheries Production Tonnage and Value 1995-96²⁰



²⁰ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 15

A major tuna farming industry based at Port Lincoln has recently been developed using aquacultural and traditional commercial fishing techniques. Wild-caught tuna are held in pens and fed so that they reach peak condition when market demand is greatest. Tuna farming has quickly become a lucrative industry and is currently netting a total of \$40 million per annum, representing 21 per cent of the total value of South Australian fisheries production.

South Australia is thought to have further aquaculture potential due to its low population density and long, sheltered coastline. To ensure the sustainable development of aquaculture, PISA and the South Australian Research and Development Institute (SARDI) have been developing management plans for all coastal waters in anticipation of a large offshore mussel and oyster culture industry, particularly in and around the Nepean Bay area.

2.4.4 Tasmania

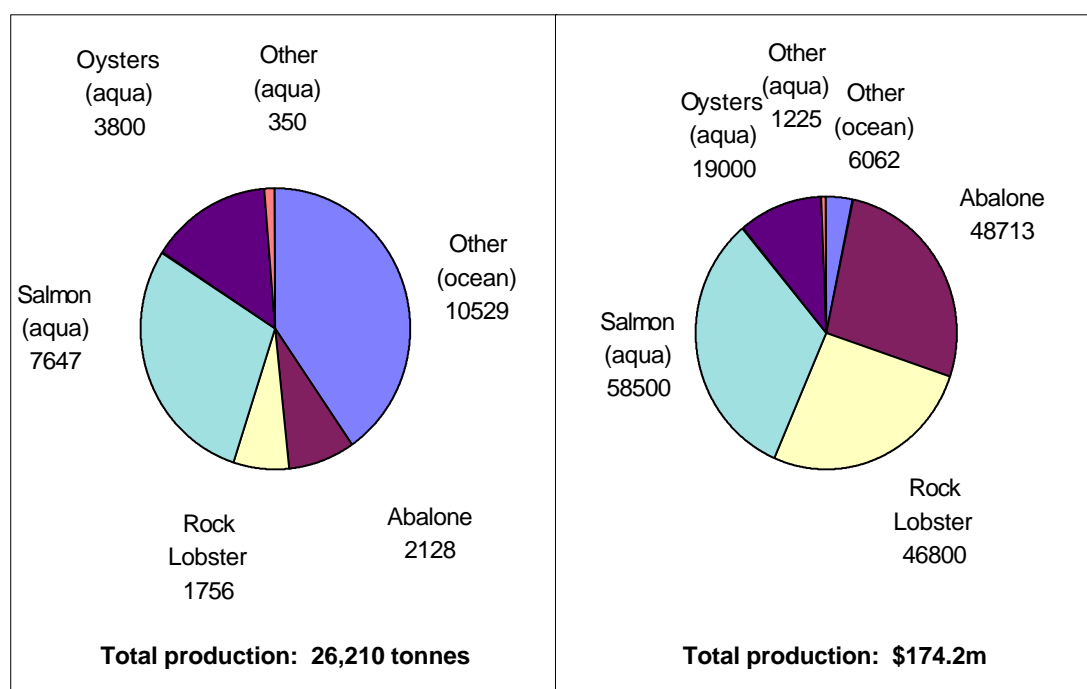
The *Living Marine Resources Management Act 1995* and the *Marine Farming Planning Act 1995* provide the framework for the sustainable management of Tasmania's marine resources. The authority charged with the management of the fishery is the Department of Primary Industry and Fisheries.

Tasmania has a licensing system for specified marine fishing methods and for all freshwater fishing. Proceeds from the licence are the major source of funds for the Inland Fisheries Commission.

The Department, in conjunction with the peak recreational organisations, has produced a code of practice to guide the estimated 100,000 Tasmanian recreational fishers in sustainable fishing practices.

Figure 2.10 illustrates the significance of rock lobster, abalone and aquaculture to fisheries production in Tasmania. Wild-caught fin fish contributed only 3 per cent to the total value of fisheries production in 1995-96.

Figure 2.10 - Tasmanian Fisheries Production Tonnage and Value 1995-96 ²¹



A unique feature of the Tasmanian commercial industry is the heavy reliance on salmonid aquaculture, comprising 30 per cent of total production value. Prior to 1995, marine farming activities in Tasmania were controlled by a 1982 amendment to the *Fisheries Act 1959*.

This legislation was perceived to be incapable of adequately managing the development of the aquaculture industry and accommodating other coastal zone users. As a result, the *Marine Farming Planning Act 1995* was enacted to regulate the expansion of the aquaculture sector. This Act sets out a regulatory framework, similar to town planning regulations, which divides areas of coastline into zones in which specific activities can be carried out. Under the Marine Farm Planning legislation, the determination of leases and the ongoing

²¹ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 16

assessment of the controls which govern marine farming activities have been modified to provide for greater communication and cooperation between the relevant regulatory authorities.

2.4.5 Victoria

Victorian fisheries are administered under the *Fisheries Act 1995* and managed by the Department of Natural Resources and Environment. The passing of the *Fisheries Act 1995* represented the first comprehensive revision of Victorian fisheries legislation in 27 years.

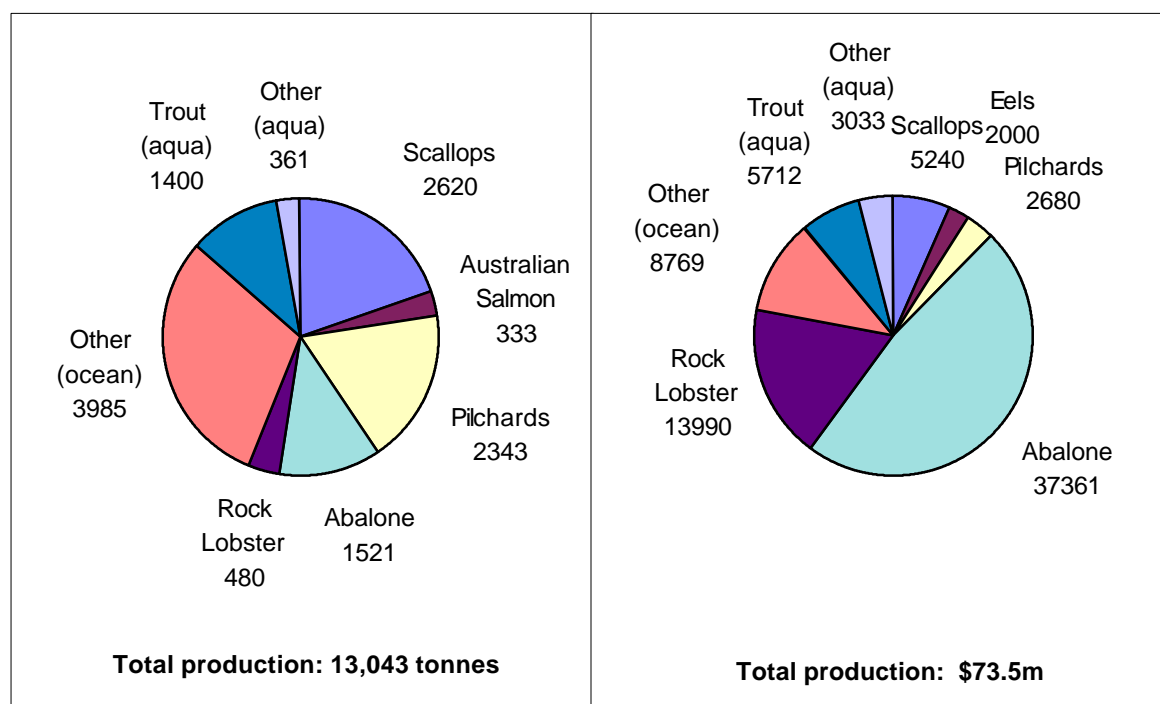
Victoria has the highest population density and population-to-coastline ratio of all states and territories.²² This has led to a high recreational fishing effort in the State. The Fisheries Division of the Victorian Department of Natural Resources and Environment has recently undertaken major recreational fishing surveys in key bays and inlets. Recreational catch rates have been estimated and these should provide a valuable database for the future management of the fishery.

There is currently an inland recreational licence fee of \$20 per year and a marine licence is about to be introduced.

Figure 2.11 shows Victorian commercial fisheries production in 1995-96 and illustrates the importance of the abalone fishery to the total value of production.

²² Victorian Department of Natural Resources and Environment, *Annual Report, 1995-96*, Melbourne, p 7

Figure 2.11 - Victorian Fisheries Production Tonnage and Value 1995-96 ²³



2.4.6 Northern Territory

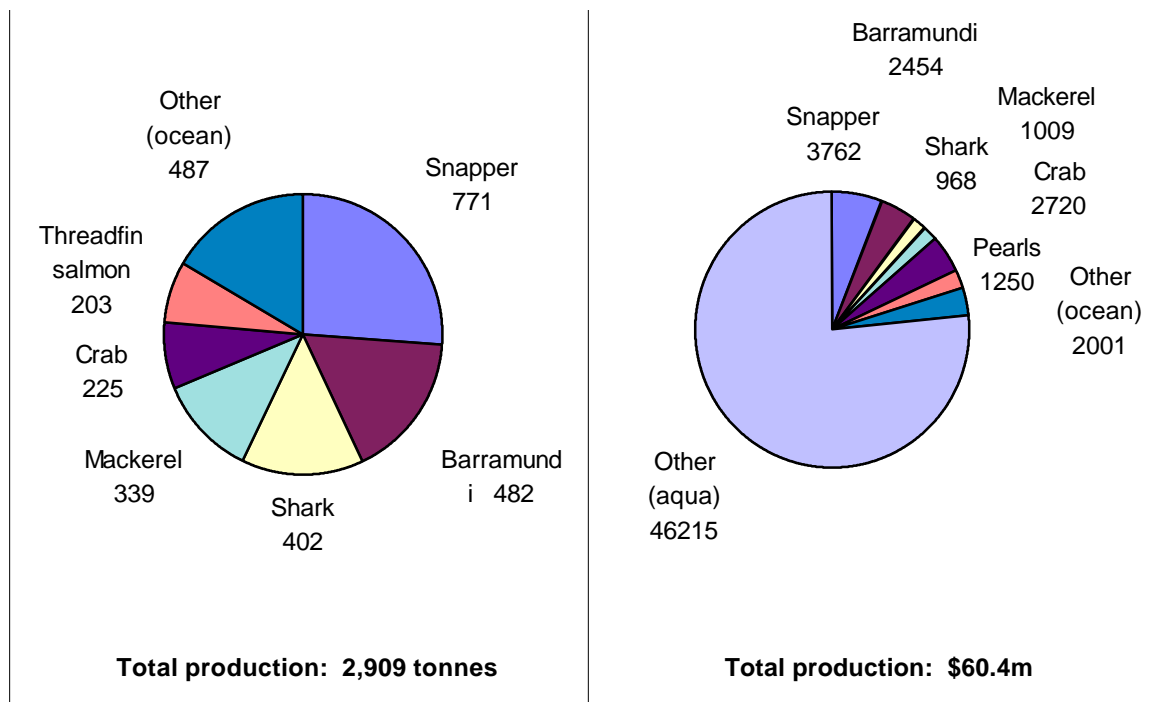
Aboriginals own 87 per cent of the Northern Territory coastline and are entitled to claim, under the *Aboriginal Lands Act*, two kilometres of sea adjacent to that land. Recently, native title property rights have been extended to involve sea claims, with the Northern Land Council claiming a 2300 square kilometre area off the north west Arnhem Land coast.

²³ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 12

The primary target species for both recreational and commercial fishers in the Northern Territory is barramundi. Tourism is one of the Territory's most important industries and the recreational barramundi fishery is an important component of that industry. The commercial exploitation of barramundi has been drastically reduced over the last 15 years to provide a sustainable share of the available resource for the recreational sector.

The Northern Territory is the smallest of Australia's commercial fisheries, valued at \$60.4 million in 1995-96. The major commercial fisheries include barramundi, mud crab, prawns, gold band snapper and mackerel. The Territory's aquaculture industry is growing and is currently based on barramundi, prawns and pearls.

Figure 2.12 - Northern Territory Fisheries Production Tonnage and Value 1995-96 ²⁴



²⁴ Australian Bureau of Agricultural and Resource Economics (1996), *Australian Fisheries Statistics 1996*, p 17

2.5 State and Commonwealth Jurisdictions and OCS Agreements

An Offshore Constitutional Settlement (OCS) is an arrangement whereby a commercial fishery which spans a number of Commonwealth and State jurisdictions is regulated under either Commonwealth or State law and, if necessary, management by a joint State/Commonwealth authority. Such agreements are structured on a fishery by fishery basis, with each fishery defined by species, method of catch and catch area. OCS agreements have the capacity to avoid fisheries being managed under a number of different State and Commonwealth laws. OCS agreements are intended to simplify the regulation of commercial fishermen by reducing the number of licences and removing compliance impediments.²⁵

In 1973 the Commonwealth Parliament enacted the *Seas and Submerged Lands Act 1973*. The Act had the effect of vesting in the Commonwealth territorial sovereignty over the strip of sea bed up to three nautical miles out to sea. To avoid State/Commonwealth jurisdictional conflicts it was agreed at the State Premiers Conference of 1978 that the States and Commonwealth would pass complementary legislation to achieve an OCS agreement in relation to both fisheries and petroleum mining. Accordingly, the Commonwealth introduced the *Coastal Waters State Powers Act 1980*, which vested a statutory title (but not sovereignty) in each State to the strip of sea bed within three nautical miles of the coast, measured from the low water mark.²⁶ This Act allowed state management of fishing activity within the three mile limit. The fisheries component of the arrangement came into effect in 1983, following an amendment to the *Commonwealth Fisheries Act 1952*. This amendment provided for the establishment of co-operative mechanisms for regulating fisheries, including OCS agreements.

²⁵ J C McCall and R A Stevens (1996). *Australian Fisheries Management Authority: Organisational Structure and Management Philosophy*, Developing and Sustaining World Fisheries Resources: The State of Science and Management 2nd World Fisheries Conference, D A Hancock et al (eds), p 659

²⁶ J Carter (1986). *Fisheries Law in New South Wales*, Department of Agriculture, New South Wales, pp 43-47

In recognition of the growing complexity of fisheries management and enforcement, the *Fisheries Act 1952* was replaced by the *Fisheries Administration Act 1991* and the *Fisheries Management Act 1991* in January 1991. The main provisions of the *Fisheries Administration Act 1991* were to establish a statutory management body, the Australian Fish Management Authority (AFMA). The *Fisheries Management Act 1991* required management plans to be drawn up for all Commonwealth fisheries and provided for the negotiation of OCS agreements between the States and the Commonwealth. The involvement of industry, the Commonwealth and States in this process is facilitated by Management Advisory Committees (MACs).

OCS negotiations between the States and the Commonwealth have been conducted since the late 1980s. The Commonwealth has been represented in these negotiations by AFMA from 1991. Although OCS arrangements have been finalised for the northern fisheries, final agreement has not been reached for the major southern fisheries.²⁷

Preliminary negotiations for a New South Wales/Commonwealth OCS agreement resulted in an interim agreement in 1994, which transferred the management of virtually all fishing activity off the New South Wales coast to New South Wales and redefined the state and Commonwealth jurisdiction boundaries. Under this agreement, New South Wales' jurisdiction was extended to the 4000 metre depth contour, which had the effect of extending the former three nautical mile limit to between 50 and 90 nautical miles.²⁸

Dr John Glaister, New South Wales Director of Fisheries, outlined the nature of the present dual fisheries administration of waters off New South Wales as follows:

Fish trawling off the coast of NSW comprises 2 geographic components that are managed separately. To the north of Barrenjoey Point [off the northern suburbs of Sydney] and less than 3nm [nautical miles] offshore south of Barrenjoey

²⁷ McCall and Stevens (1996), *Australian Fisheries Management Authority: Organisational Structure and Management Philosophy*, p 659

²⁸ G Hamer (1991). "The Offshore Constitutional Settlement: New South Wales Fisheries", *Fishnote DF/3*, NSW Agriculture and Fisheries, Sydney, p 5

Point, fish trawling is under the jurisdiction of New South Wales Fisheries. South of Barrenjoey Point, excluding state waters inside 3nm, fish trawling occurs within the South East Fishery (SEF) and is managed by the Commonwealth... The SEF extends... around Victoria and Tasmania and westward to Cape Jervis in South Australia (excluding state waters). Both the NSW-managed trawl fishery and the SEF catch multiple species across a range of habitats on the continental shelf and slope. In the SEF a regime of total allowable catches (TACs) and individual transferable quotas (ITQs) exists for 16 species (or species groupings)... In 1993 [there were] 67 fish trawlers operating in the NSW-managed fishery [that] reported a minimum of 50 days fished... Of these vessels, 39 were also endorsed to fish in the SEF and 28 were restricted to the NSW trawl fishery. Of the 28 vessels restricted to the NSW trawl fishery, 20 vessels fished mostly in waters to the north of Sydney.²⁹

Richard Stevens, Chairman of AFMA, when outlining the development of OCS agreements and the particular problems in their finalisation with respect to NSW, stated:

The first OCS arrangements for fisheries were developed in the late 1980s. Since that time, the States and the Commonwealth have held ongoing negotiations to further develop those OCS arrangements. Those negotiations have been a stop-start affair, with legal barriers, management plans, industry consultation and changes in Government policy all affecting progress.

In the case of New South Wales, the issues we have been trying to resolve are not necessarily straightforward, and include recreational fishing for tuna and billfish, trawling by Commonwealth licensed vessels in the south east fishery

²⁹ G Liggins (1996). *The Interaction between Fish Trawling (in NSW) and Other Commercial and Recreational Fisheries*, Report to the Fisheries Research and Development Corporation, NSW Fisheries Research Institute, Sydney, p 8

in waters which are traditionally State waters, line fishing by State licensed vessels for fish species under quota management in Commonwealth waters and so on.³⁰

Mr Steve Dunn, Executive Director, Policy Unit, NSW Fisheries, explained that the major impediments to finalising OCS agreements from the State's point of view are the inequities and management difficulties created by jurisdictional boundaries.

Mr Dunn stated:

New South Wales would like to take jurisdiction for rock lobsters throughout its range. At the moment we have jurisdiction for trap-and-line fishing but there is still a loophole whereby trawl fishermen can take rock lobsters. That is currently controlled by a condition on their Commonwealth permit which says that they cannot land rock lobsters. But that could be taken away, so we would prefer to have jurisdiction. Likewise, we have fishermen operating in fisheries in which the Commonwealth has the major part of the jurisdiction and the Commonwealth would like control over that but our fishermen rely on those species. The decisions that were made six or seven years ago now present what sometimes appear to be immovable barriers.³¹

In the face of ongoing complications and confrontation over the jurisdiction of fisheries management, NSW Fisheries has indicated that a joint authority may provide a management solution to State/Commonwealth conflicts. Dr Glaister stated:

We have had meetings with the Commonwealth and said, "Tell us what the problem is and we will try and work towards a solution". In each case there is an agreement that it is being managed as well as possible given the two

³⁰ Evidence of Mr Stevens, 5 May 1997, pp 5-6

³¹ Evidence of Mr Dunn, 7 July 1997, pp 31-32

jurisdictions. Short of going into a joint authority—I have suggested to Richard [Stevens] that if he has some concerns that are not being addressed by the current arrangements perhaps we need to look at a joint authority with as small a bureaucracy as possible—if there is some way of getting an answer to some of these questions, fine.³²

The Standing Committee considers that an Offshore Constitutional Settlement between New South Wales and the Commonwealth is essential to ensure the sustainable exploitation of joint-jurisdiction fisheries. Accordingly, the Standing Committee recommends:

Recommendation 1

That the Offshore Constitutional Settlement be resolved as a priority by NSW Fisheries to ensure a holistic (consistent) approach to fisheries management across the State/Commonwealth boundary (3 NM).

³² Evidence of Dr Glaister, 7 July 1997, p 31
