

# **INTERNAL REPORT**

## **A SOCIOECONOMIC PROFILE OF THE TASMANIAN COMMERCIAL SCALEFISH FISHERY**

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## Executive Summary

In 1998 determination of commercial access to scalefish species by licence corresponding to gear allocation was introduced in Tasmania. More fishing gear, however, was allocated than was taken up and used. With the fishery thus 'over-gearred', some form of structural adjustment was decided by fishery managers to be worth investigating. In the view of fishery managers, whether and how to pursue structural adjustment required, among other things, availability of a systematic understanding of the socioeconomics of the scalefish fishery. This report was commissioned to provide such an understanding as well as to inquire after the course to be taken, in the view of industry, in managing the fishery.

The first step in the research was posting a letter of introduction and invitation to participate in the study to all licence holders in the fishery. *No Tasmanian scalefish licence holder without recorded catch since 1998 responded to the letter.* A decision was therefore taken to focus the study on Tasmanian SFA, B and C licence holders with recorded catch since 1998. More than 50 per cent of these licence holders were included in the study. In all, 126 interviews, 85 with fishers, were conducted involving 166 participants.

In addition, a letter of introduction and invitation to participate in the study was sent to all holders of a fishing licence (Rock Lobster). Five licence holders responded to this letter, and all but one were interviewed (contact and logistical difficulties conspired against interview in this one instance).

Some of the main points in this report are as follows:

- Operators participated in the fishery across a wide range in terms of time spent, from full time, through varying amounts of part time, to minor participation only; number of people involved in the fishery was thus greater than indicated by participation measured in full time equivalent units.
- Having noted this difference between number of people compared with full time equivalent units, and considering only fishers and *not buyers*, it was calculated that approximately 185 people made up 115 full time equivalent positions in the sample; extrapolating to all fishers in the commercial scalefish fishery approximately 150

full time equivalent positions were calculated to exist, representing 400 people (note that 'full time' is often weather dependent, and that this extrapolation is generous given that some minor double counting of boat hands/boat drivers may have occurred and that a substantial component of this participation is made of individuals who are engaged primarily in the Tasmanian commercial rock lobster fishery).

- It was possible to give gross income for 70 scalefish fishing operations in the sample which sold their catch in the 12 months prior to interview. In total, these 70 operations *grossed* approximately \$3.8 million, the average being \$55,000. These 70 operations took a total of approximately 1050 tonnes from the fishery to gross this amount (a gross return of approximately \$3.60 per kilogram). If, for example, costs incurred fishing amount to approximately one-third of operators' gross returns, operators' average return before any interest and/or taxation were deducted was approximately \$37,000. Considering all fishers in the commercial scalefish fishery, i.e. not including returns to buyers, gross returns to fishers totalled approximately \$5.7 million, a gross return of approximately \$3.80 per kilogram; average return per operator after deducting costs was approximately \$15,000.
- In only two interviews did participants maintain that 'latent effort' was not an issue in the fishery, and latent effort was commonly considered to be an issue across all categories of licence in the fishery.
- Any reduction in number of licences was said to require consideration regarding cost of entry to the fishery.
- Preference was commonly expressed to the effect that the fleet be largely owner-operated, and many participants considered that owner-operation should remain within the reach of willing and able fishers.
- It was often stated therefore that licences should be transferable only between previous, present and prospective fishers.
- Overall, opinion of stocks was that non-migratory species had been fished down to in some cases very low levels, and that migratory stocks had been overfished, principally elsewhere (readers are urged to consult sections regarding each region of the fishery for more specific assessment of stocks by participants).
- Number of fishers was said to be at its maximum in many regions of the fishery.
- Many participants valued the diversity afforded by general scalefish fishing licences regarding gear and range of species allowed to be taken, and opposed this diversity being further reduced by access to species additional to banded morwong and wrasse being licensed separately.

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## 1. Introduction

In 1998, determination of commercial access to scalefish species by licence corresponding to gear allocation was introduced in Tasmania ('scalefish' refers also to species of shark and cephalopod). Four tiers of general scalefish licence were created, 'A', 'B', 'C' and 'Rock Lobster'. A limited number of gear-based licences were also created for beach seines, purse seines and small mesh gillnets. A limited number of species based licences for banded morwong, wrasse and Australian salmon were also created. All licences were allocated according to catch history. Apart from banded morwong, wrasse, Australian salmon, and school and gummy shark (these last two being accessed through a limited number of Tasmania only shark hook and gillnet licences), licensed fishers were allowed to take and sell any Tasmanian scalefish species caught with their gear allocation, subject to some trip limits. These new arrangements replaced that of holders of Tasmanian commercial fishing boat licences having access to scalefish species with few limitations on amount of gear used, species that could be taken and in what quantity species could be taken.

More fishing gear, however, was allocated in 1998 than was taken up and used in the fishery. For example, between the introduction of the management plan in 1998 and May 2002 approximately 26 per cent of scalefish A (SFA) licences had no catch recorded on them, 33 per cent of scalefish B (SFB) licences had no recorded catch, and 69 per cent of scalefish C (SFC) licences had no recorded catch. Fishery managers considered inactive licences to constitute substantial latent effort in the fishery. Latent effort was maintained to have the potential to undermine the ability to respond quickly and effectively to changes in the fishery. With the fishery considered to be 'over-gearred', some form of structural adjustment was said by fishery managers to be worth investigating. Whether and how to pursue structural adjustment required, among other things, the availability of a systematic understanding of the socioeconomics of the scalefish fishery. This report was commissioned to provide such an understanding as well as to inquire after the course to be taken, in the view of industry, in any change to management of the fishery.

This report was given two principal objectives:

- to compile a socioeconomic profile of the Tasmanian commercial scalefish fishery, and
- to document the views of those in the industry on the future direction of the scalefish fishery.

This report, then, is primarily about the people of the fishery and their views. The research for this report also generated a wealth of data concerning stocks. These data, however, are not the subject of this report. It has been requested by the Scalefish Fishery Advisory Committee (SFAC) that this report be short (no longer than 30 pages), readable and oriented towards the present review of the management plan. More detailed reporting of data relating to various species, specific fishery regulations and so on is intended in a subsequent report.

Few recommendations are contained in this report. The intention underlying this report is to gather information. The aim in this report is to contribute to the context informing the present review of the commercial scalefish fishery management plan. The structure of this report, following a brief outline of the research methods and techniques used, is to describe the sample of participants. In other words, a condensed socioeconomic profile of the sample is presented. Second, the sample is discussed by region. Third, major issues that emerged from the research relevant to the review of the 1998 scalefish fishery management plan are presented.

## 2. Method

On commencement of the research *all licence holders* were given an opportunity to participate in the study. A letter introducing the study and inviting participation was sent to every scalefish licence holder (Appendix 1). Over a dozen people subsequently telephoned their willingness to participate in the research. None of these respondents were holders of scalefish licences without recorded catch since 1998 residing in Tasmania. Given limited time and resources, therefore, a decision was taken with fishery managers to focus on scalefish licence holders with recorded catch since 1998. For the same reasons, decisions were taken not to include mainland licence holders (fishery managers were most interested in licence holders residing in their area of jurisdiction).

From this point on, then, the aim was to concentrate on the positions of SFA, B and C licence holders active in the fishery since 1998. In other words, the intention was to investigate the operating circumstances behind SFA, B and C licences with recorded catch since 1998 (in all but a few cases gear and species based licences are attached to scalefish licences). SFA, B and C licences with recorded catch, therefore, became the 'population' from which the sample was drawn.

The views of licence holders inactive in the fishery since 1998, therefore, are not presented in this report. These licence holders may have positions different from those described in this report. Reviewers of the management plan may benefit from availing themselves of these positions at some point in the future.

Questions were developed in consultation with the SFAC to pilot interview those Tasmanians who responded to the universal invitation-by-letter (Appendix 2). In person interview was the research method chosen to ensure as far as possible a high participation rate as well as due to the intensive nature of the information sought. No request for interview was declined. In other words, a 100 per cent participation rate was achieved regarding the designed sample of SFA, B and C licence holders with recorded catch since 1998. Following pilot interviews, notation was entered into the computer software program *Excel* to construct a data matrix. The resulting variables were then used to structure non-pilot interviews.

After pilot interviews had been undertaken and the interview schedule fine-tuned, non-pilot interviewing was begun. Various 'regions' of the Tasmanian commercial scalefish fishery were visited for five days at a time. The following places were used as bases for interviewing: Stanley, Devonport, Launceston, Bridport, St Helens, Bicheno and Flinders Island. The south-east region was accessed from Hobart. Three regions were not visited due to low numbers of SFA, B and C licences with recorded catch since 1998 and the constraints of time and resources: the west coast, King Island and mainland Australia (principally Victoria, though two Victorian licence holders responded to the universal invitation and were interviewed by telephone) (Table 2.1).

**Table 2.1 Number of interviews and number of people interviewed: Tasmanian regions and Victoria, listed alphabetically**

Totals in some of the tables below may not equal either of the totals given in Table 2.1 due to non-response by participants or to some interviews including more than one participant.

Region	No. interviews	No. people
East	32	46
North	14	18
North-east	17	27
North-west	12	16
South-east	40	46
Victoria	2	2
West-north-west	9	11
Totals	126	166

Participants in the south-east region of Tasmania, apart from those who responded to the universal invitation, were interviewed last. The south-east region aside, efforts were made to contact and interview holders of all SFA, B and C licences with recorded catch since 1998. In other words, from Marrawah clockwise around Tasmania as far as Saltworks and including Flinders Island a 'census' of holders of SFA, B and C licences with recorded catch since 1998 was conducted. The reason for starting in the west-north-west was that fishery managers considered that more was known about operators in the south-east than in regions away from Hobart. With time and resources limited, it was decided to start with those regions about which less was known.

For these reasons, only a sub-sample of holders of SFA, B and C licences with recorded catch since 1998 in the south-east was possible. The sub-sample totalled 40 interviews. Ten of these interviews were with individuals who responded to the universal invitation and were interviewed at the beginning of the research. The remaining thirty were the last group of interviews conducted. They were drawn from a sub-population of 82 SFA, B and C licences with recorded catch since 1998 with a postal address in south-east Tasmania. Given that fishery managers were most interested in the positions of those most active in the fishery, 15 licence holders were selected to be interviewed who were known by fishery managers to be largely full time participants in the fishery. The remaining 15 interviews were allocated randomly proportional to actual dispensations of SFA, B and C licences with recorded catch since 1998 in the region, i.e. four SFA licences, seven SFB licences and four SFC licences were selected using the randomising function in *Excel*.

In all, 126 interviews were conducted involving 166 participants. In other words, more than 50 per cent of SFA, B and C licence holders with recorded catch since 1998 were included in the research. Noting that licences can be held in packages with other licences in the scalefish fishery as well as in other both Tasmanian and Commonwealth fisheries, of 66 SFA licences, 49 or approximately 74 per cent had recorded catch between 1998 and May 2002. For SFB licences, 108 or 67.5 per cent had recorded catch, and for SFC licences 61 or approximately 32 per cent had recorded catch. Taken together, 218 SFA, B and C licences, approximately 52 per cent of these general licence categories, had recorded catch between 1998 and May 2002. The proportions

of SFA, B and C licences with recorded catch closely approximates the proportions of interviews across these licence categories (Table 2.2).

**Table 2.2 SFA, B and C licences with recorded catch since 1998 compared to number of interviews across these licence categories**

Number of SFA, B and C licences with recorded catch is as at 9/5/2002; absolute number of interviews does not equal 126 due to some interviews being with other than licence holders, for example with buyers; totals for percentages do not equal 100 due to rounding.

	Recorded catch		No. interviews	
	No.	%	No.	%
SFA	49	22.4	28	24.1
SFB	108	49.5	54	46.5
SFC	61	27.9	34	29.3
Totals	218	99.8	116	99.9

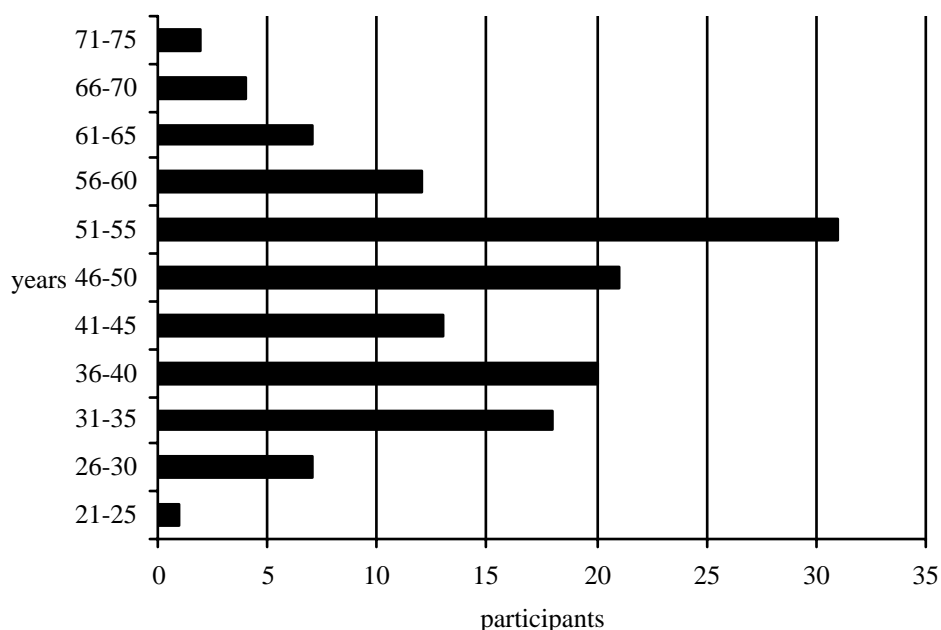
In addition, a letter of introduction and invitation to participate in the study was sent to all holders of a fishing licence (Rock Lobster). Five licence holders responded to this letter, and all but one were interviewed (contact and logistical difficulties conspired against interview in this one instance).

There can therefore be reasonable confidence in the sample being representative of the population, remembering that this population does not include licences with no recorded catch between 1998 and May 2002.

### 3. Description of the sample

#### 3.1 Sex and age

Approximately 95 per cent of participants in the sample were male. The bulk of participants in the sample were aged between 31 and 60 (Fig. 3.1).



**Fig. 3.1** Age profile of participants in the sample

Median age in the profile is approximately 45, suggesting that entry to the fishery by ‘young’ fishers is possible at present. Unlike the commercial rock lobster fishery, for example, the sample does not display a major distinction between older owners and younger lessees. Many participants considered that a prospective owner-operator could still work their way into owner-operation. The age profile of the sample suggests that the scalefish fishery is at present reproducing its human ‘capital’.

#### 3.2 Type

Approximately three-quarters of participants in the sample were owner-operators (Table 3.1), compared with approximately 50 per cent of boats in the rock lobster fishery being owner-operated (Gardner *et al.* 2001). In 17 or approximately 13.5 per cent of interviews, participants were operating with their son or daughter as a boat hand. In 35 or 27.7 per cent of interviews, participants stated that their son or daughter was a commercial fisher, either with them or elsewhere. In 20 or 15.8 per cent of

interviews participants considered that their son or daughter might enter, or in some cases re-enter, the commercial scalefish fishery. A number of participants were awaiting the present review of the management plan in expectation of a clear signal regarding the direction of the fishery before making plans with their son or daughter regarding possible (re-) entry. Some scepticism was apparent in the sample regarding the longer-term prospects of the fishery for the next generation of fishers. In a number of cases sustainability of the present level of fishing of some stocks was questioned, while in others low financial return and the strain fishing could put on family life were mentioned. A number of participants held that tertiary education or a trade made possible access to more attractive employment opportunities. One view general to the sample regarded the inability of entering any Tasmanian commercial fishery as an owner-operator other than the scalefish fishery without access to substantial wealth, and many participants considered that owner-operation in the scalefish fishery too could move beyond the reach of willing and able but not wealthy fishers. Such a move was viewed negatively by many participants.

**Table 3.1 Participants in the sample by type**  
‘Unclassified’ refers principally to fishers’ partners

Type	Number
Owner-operators	97
Lessors	9
Buyers	7
Lessees	5
Owner-operators/lessors	4
Owners	4
Licence recently liquidated	2
Boat hands/prospective owner-operators	1
Prospective owner-operators	1
Unclassified	36
Total	166

In 95 or approximately 75 per cent of interviews, participants gave their family lineage in the fishery. In nearly 50 per cent of these interviews, participants stated that they had no family lineage in the fishery (compared with approximately 35 per cent of participants with no family lineage in the rock lobster fishery). This figure supports a view put by many participants that the commercial scalefish fishery was something of an education ground for fishers without familial experience in a commercial fishery (personal and often familial experience as a recreational fisher, however, was common for fishers without family lineage in a commercial fishery).

Two types in Table 3.1 are not self explanatory, ‘owner-operators/lessors’ and ‘licence recently liquidated’. First, by ‘owner-operators/lessors’ is meant an operator with a package that includes a number of licences. He or she fishes some of these licences but leases others out. In no way did such participants consider their leased licence(s) to be

'latent'. Apart from the fact that their licence was being used, they held themselves to be operators who diversified their fishing across a number of species, often using different kinds of gear. In any one year they may use different combinations of licences depending on complex interrelations of personal preferences, market prices, abundance and so on. They were full time fishers with boats, 'skippers tickets' as well as in terms of sea time and they maintained that all their commercial scalefish licence(s) were valued options in any fishing year. (It is also possible to shift fishing between Commonwealth and State jurisdictions.) The main point is that many participants stated that licences being leased out *or not being used* by those fishing other licences should be considered differently from licences held by people who did not fish, particularly if such licences were not being used.

Second, by 'licence recently liquidated' is meant participants contacted who had in 2002 surrendered their SFC licence to the Department of Primary Industries, Water and Environment (DPIWE) in exchange for payment from a third party licence holder benefiting from a change in licence conditions in some way.

### 3.3 Fleet

The Tasmanian commercial scalefish fishery displays a wide range of operator types. The fleet ranges from high volume, low market price industrial fishing type operations involving steel vessels approximately 80 feet in length to low volume, high market price 'artisanal' or 'cottage' type operations using aluminium boats under six metres in length. This latter type constitutes the largest proportion of operators in the fishery. For example, in 47 interviews, participants operated in the fishery using an open aluminium boat less than six metres in length. Few such boats were equipped to be slept on. Fishers not using such boats tended to use a boat suited to operating in another fishery. The majority of operators used only one boat (the ratio of boats per operator interviewed was approximately 1.2).

### 3.4 Full time compared with part time operation

When interviews in which participants did not respond to questioning regarding the full or part time status of their operation are removed from the sample (assuming these to be proportionally distributed regarding the revised sample), it can be seen that in 58 per cent of interviews, participants were engaged full time in the *commercial fishing industry* (Table 3.2).

**Table 3.2 Operating status of participants in interviews regarding the *commercial fishing industry***

	No. interviews	Percentage
Full time	65	58.0
Part time	43	38.3
Semi-retired	4	3.5
Totals	112	99.8

Part time participation ranged from one-third to three-quarter time. Full time participation, especially, was usually qualified as being dependent on clement weather,

and number of days fishing per week, month or year was therefore usually given. The average number of days fished per year for both full and part time fishers in interviews was approximately 114. In other words, when a year is considered to have 365 twenty-four hour blocks, the average number of blocks in which fishing was undertaken by participants in interviews was 114. Fishing could take place during the day or night, but rarely were all 24 hours used (a minority of fishing was done at night, and most participants were strongly against so-called night netting, i.e. leaving nets unattended in the water overnight). Note, that many participants considered the winter and spring of 2002 to have been particularly windy and that many had done less fishing as a consequence (a number of participants held that this fact should be taken into account in stock assessment regarding 2002).

Though participants reported in 65 interviews that they were occupied full time in the *commercial fishing industry*, in only 25 interviews did participants state that they were not diversified outside the *commercial scalefish fishery*. As noted, for example, in 20 interviews participants also operated in the commercial rock lobster fishery. Such interviews were likely to be with participants whose 'core business' was rock lobster fishing but who also operated in a secondary capacity in the scalefish fishery. Diversification regarding the commercial abalone fishery, on the other hand, usually involved participants whose core business was in the scalefish fishery but who supplemented their income by tending a dinghy, for example, for an abalone diver.

Diversification involving work outside the commercial fishing industry was also common. Of the 43 interviews in which participants stated that their involvement in the commercial scalefish fishery was part time, in 19 of these participants were occupied in *full time* employment outside the commercial fishing industry. Work as a tradesperson or in 'factories' of various kinds was common, but a number of participants also operated outlets for fish ranging from fish shops to restaurants (these were connected in varying degrees through product to the commercial fishing industry). A number of participants were of the view that there was an important difference between part time operation in the commercial scalefish fishery as 'cream' on top of full time employment outside fishing, compared with part time operation as a component of a full time work load.

*Part time* work outside the commercial fishing industry was also evident in the sample. Many regions of the scalefish fishery can be considered to be remote from labour markets associated with urban centres. Like many others in their region, a number of participants displayed a patchwork of employment that involved manual labour and trades-based work. Most participants were practical individuals who worked with their hands, and many included a substantial amount of do-it-yourself (DIY) in their fishing. For example, reducing expenditure by building their boat, doing their mechanics or making their fishing gear was common. Such multi-skilled individuals pieced together an annual income from various sources, including the scalefish fishery. A number of participants maintained that it was difficult to live in a remote area without having a number of different part time occupations. For example, as well as operating in the scalefish fishery, one participant ran a small farm, chartered himself and his boat to abalone divers, and let tourist accommodation. Many of those interviewed considered there to be insufficient return from their commercial fishing to justify full time employment. Their commercial fishing, however, was a valued part of the composition of their per annum income, to say nothing of the variety and enjoyment it brought to

their working year. ('Lifestyle' was an often used shorthand for being outdoors on the water fishing according to a participant's own determination).

### **3.5 Income**

It was possible to give gross income for 70 scalefish fishing operations in the sample which sold their catch in the 12 months prior to interview. In total, these 70 operations *grossed* approximately \$3.8 million, the average being approximately \$55,000. These 70 operations took a total of approximately 1050 tonnes from the fishery to gross this amount (a gross return of approximately \$3.60 per kilogram). If, for example, costs incurred fishing amount to approximately one-third of operators' gross returns, operators' average return before any interest and/or taxation were deducted was approximately \$37,000. Considering all fishers in the commercial scalefish fishery, i.e. not including returns to buyers, gross returns to fishers totalled approximately \$5.7 million, a gross return of approximately \$3.80 per kilogram; average return per operator after deducting costs was approximately \$15,000. (Given the limited length of this report, it is not possible to discuss the calculations made in considering the fishery-wide scale using participant information and catch return data for 2001/2002).

In nine interviews, participants stated that they did not sell their catch from the commercial scalefish fishery. These participants used their catch for bait, to feed themselves and their family and friends, or to barter. In at least three other interviews, participants held that they did no more than cover the costs of their fishing while pursuing an interest and providing fish for their own use.

Payment of boat hands did not, in over one-third of cases reported in interviews, appear 'on the books' ('boat hands' include those assisting a beach seine operation, for example, who may not actually work on a boat). A number of operators used cash payment, payment-in-kind (usually fish) and at times no payment to minimise costs and avoid formal employer status. Some boat hands were said to be prepared to keep arrangements off the books in the interest of not interfering with payments from social security, while others were said to appreciate the experience fishing and/or the 'feed of fish'. In over half the cases reported in the interviews, however, boat hands were formally paid a percentage of the gross payment for the catch. The percentage paid varied from 14 to 30.

### **3.6 Employment**

In terms of employment, approximately 70 full time equivalent operator positions were calculated to be present in the sample (note that this calculation relates to time not people, i.e. three participants who stated that they were involved in the Tasmanian commercial scalefish fishery one-third of the time, for example, equal one full time equivalent position). In addition, approximately 45 full time equivalent boat hand and boat driver positions were calculated to be present in the sample (in 34 interviews, participants stated that they worked their scalefish fishing operation single handedly). Thus, approximately 115 full time equivalent positions 'on the water' were calculated to be present in the sample (approximately 185 people contributed time to these positions). (The buyer sector may contribute as many as approximately 40 full time equivalent positions.) As noted, however, many days in a year may be spent off the

water due to inclement weather, leaving time to maintain gear and/or to undertake another occupation. Considering only fishers, then, extrapolating to the entire commercial scalefish fishery, approximately 150 full time equivalent positions were calculated to exist, representing approximately 400 people. Note that this extrapolation is generous given that some minor double counting of boat hands/boat drivers may have occurred and that a substantial component of this participation is made of individuals who are engaged primarily in the Tasmanian commercial rock lobster fishery (for example, over 40 per cent of non-sample operators were engaged primarily in the commercial rock lobster fishery). (As noted, given the limited length of this report, it is not possible to discuss the calculations made to extrapolate from the sample to the fishery using participant information and non-sample catch return data for 2001/2002, except to state that actual ratios were calculated and used).

### **3.7 Catch**

Of the catch said to have been taken by participants in the 12 months preceding interview, more Australian salmon was caught than any other species by a factor approaching four (Table 3.3). (Note that figures in Table 3.3 are most likely overestimates due often to dealing in interviews with recalled rather than recorded catch. The rounding up that can occur in recall can be assumed to be consistent across the sample, thus making possible comparison internal to the sample. Figures less subject to this propensity, for whole weight, as well as being for the entire fishery, are available in annual fishery assessment reports and readers are encouraged to consult the report for the 2001/02 fishing season. The reference to 'whole weight' [sometimes called total weight] in the previous sentence refers to conversion from sold to whole weight undertaken in fishery assessment; note that the weights for some of the species in Table 3.3 can include sold weights different from whole weights.)

**Table 3.3 Species taken by participants in the 12 months prior to interview, kilograms**

\*At times, kilograms sold, not caught. This applies in two ways: first, in at least three interviews participants stated that they only recorded sold fish on their catch returns, indicating a propensity common in the fishery to consider catch in terms of saleable weight; and, second, weight lost due to any gutting, heading, filleting and so on by fishers for sale may not be included; #Includes a range of fish caught using graball gillnet and taken either for sale or eating (e.g. bastard trumpeter, boarfish and blue warehou), or for bait (e.g. marble fish, leatherjacket and sweep).; NB: As these figures have been derived from a sample, amounts for some, particularly low kilogram, species may vary considerably from actual amounts. Data on which this table is based have been standardised to be comparable within a computerised data matrix; some data included in Table 3.4 below have been omitted as part of this process.

<b>Species</b>	<b>Kgs*</b>
Australian salmon	451,800
Garfish	121,527
Calamary	71,474
Flathead	58,191
Banded morwong	51,801
Wrasse	50,908
Whiting	40,000
Blue warehou (unspec.)	38,200
Barracouta	33,950
Octopus	27,000
Mixed net fish#	26,950
Pike (both species)	25,200
Gummy Shark	19,095
Striped trumpeter	12,735
Jackass morwong	8,500
Mullet	6,000
Bastard trumpeter	5,740
Elephant Shark	4,500
Leatherjacket	4,400
Flounder	3,840
Shark (unspec.)	3,100
Tuna (predominantly Albacore)	1,700
Gurnard	1,170
Perch (unspec.)	1,100
Cod	1,000
Mako Shark	500
Sweep	500
Anchovy	450
Boarfish	250
Tiger shark	200
Squid	100
<b>Total</b>	<b>1071,881</b>

The vast majority of Australian salmon was taken by a single operation, as was also the case regarding catches of octopus and whiting. Catches of pike and blue warehou were taken by a handful of operations only due to restriction of the number of small mesh licences and resource scarcity respectively. Catches of remaining species in the top 15 places in Table 3.3 were spread among often dozens of fishers. Garfish (predominantly sold into the Melbourne fish market), calamary (Melbourne fish market), flathead (retailed filleted to local consumers), banded morwong (live to Sydney and Melbourne) and wrasse (live to Sydney and Melbourne) could all return prices to fishers over \$5 per kilogram. These species were targeted as a consequence.

Blue warehou were reported to have been largely absent from the fishery since 1999, and a number of participants missed the absence of this previously reliable resource regarding their catch and income. In 42 or one-third of interviews, participants were prepared to fish for blue warehou should they again appear in the fishery in exploitable quantities.

One species that had recently appeared in the fishery in exploitable quantities, after an absence of some years, was barracouta. To the disappointment of a number of participants, however, much of what was caught was sold as bait due to consumers' apparent preference for boneless fillets and a tendency for large quantities of fish to 'crash' the market price. Some participants warned that blue warehou could also be subject to price crashing should they appear in exploitable quantities.

A number of participants therefore considered that it was possible to over-supply a market as well as to over-fish a resource, the result being both crashed prices and ultimately collapsed stocks. Barracouta and blue warehou, then, provided good examples, in the view of a number of participants, of the need, first, to remove so-called latent effort from the fishery in order, second, to focus on quality rather than quantity of catch. This view touches on a more general opinion, elaborated below, that capacity in the present structure of licences for effort to be activated following an increase in either market price (e.g. calamary in spring 2002) or abundance needs to be addressed. Such activation risks price crashing in the case of abundance, and spatial conflict and stock pressure in the case of a rising market price (ultimately, too, market price is likely to fall if demand can not reliably be met due to resource decline).

### **3.8 Buyers**

Due to limited time and resources, full investigation of the buyer sector was not undertaken (by 'buyers' in this report is meant processors, the former term being used as it was not possible in all instances to consider those purchasing fish as operating a processing plant or 'fish factory'; 'sell' is used to describe the supply-side of a transaction between a fisher and a buyer, for example, while 'retail' is used to describe sale of fish to consumers). Most major buyers were interviewed, but a number of smaller buyers – wholesalers as well as fish punts, restaurants and so on – were not contacted. Buyers interviewed ranged from large processing enterprises employing scores of people to small outlets retailing both raw and cooked take away seafood to local consumers (in addition to the seven buyers in Table 3.1, a number of fishers operated retail outlets that bought fish). An indication of the range of buyers can be gained by considering to whom fishers interviewed sold their catch (number of 'fishers' in this section is 85, i.e. catch information is available for participants from 85 or 67.5

per cent of the interviews, primarily regarding the 12 months prior to interview) (Table 3.4).

**Table 3.4 Major buyers and other users of the catch of interviewed fishers: ranked in descending order of amount of kilograms involved.**

^The top nine Tasmanian buyers according to fishers' data from the sample were, in descending order from the most to the least number of kilograms sold to, George Town Seafoods Pty Ltd, Huon Valley Seafoods Pty Ltd, Abtec Pty Ltd, Salty Seas, Wilson Seafoods, Jataly Australia Pty Ltd, PD Wholesalers, Petuna Seafoods, and Dunalley Fish Market; #Includes tourists; \*These figures are from unsolicited specifications; had all participants been asked the amount of fish they caught for themselves, their family and friends (no payment being made for such catch), these figures would most likely be higher; NB: These figures are aggregates of those given by fishers; they are not buyers' figures, which are likely to be different given that research included a sample of fishers only as well as the propensity to overestimate in recall noted above; data on which this table is based are 'raw' in the sense that they have not been standardised as in Table 3.3 above; omissions made regarding Table 3.3 are included in Table 3.4 thus resulting in a difference in amount of catch of approximately ten tonnes.

Buyers/users	No. fishers using	Kilograms	Gross	\$/kg
Top nine Tasmanian buyers^	61	711,91	\$1,873,531	\$2.6
Melbourne fish market	19	159,58	\$1,127,695	\$7.0
Rock lobster fishers (bait)	7	75,830	\$64,464	\$0.8
Local mongers, punts, butchers	22	50,113	\$262,960	\$5.2
Own bait	5	43,300	approx. saving \$35,000	\$0.8 0
Local restaurants & 'pubs'	19	21,413	\$214,490	\$10.
Direct to local consumers#	20	12,630	\$76,220	\$6.0
Self, family and friends*	18	5,945	saving	-

Note that price per kilogram for the top ten Tasmanian buyers has been calculated using the totals for kilograms and gross payments; the large quantity of Australian salmon thus affects this figure. If prices per kilogram for each buyer are compared, the resulting average price per kilogram is \$5.29. When all uses of the catch of interviewed fishers are taken into account, 1080.729 tonnes of fish were sold for a total of \$3,654,360 (gross), i.e. at a rate of \$3.38 per kilogram (or \$4.66 if prices per kilogram for each use are averaged). (Difference between income above and sales in this instance is due to income often being stated during, as opposed to sales being calculated after, interviews).

Considering the buyers in Table 3.4 according to species sold to them, different types of buyers are evident (Table 3.5).

**Table 3.5 Major species by quantity sold by participants interviewed to major ‘buyers’ over approximately the financial year 2001/2002.**

\*‘Melbourne fish market’ refers not to a single enterprise but to a market place in which combinations of fishers, agents and wholesalers buy and sell fish from all over Australia predominantly for retail in Melbourne.; #For example, bastard trumpeter, boarfish and jackass morwong; ^For example, groper, bluehead wrasse and sweep; NB: Again, this information has been produced from participants’, primarily fishers, data given in interviews; not all buyers were interviewed.

Buyers/users	Major species by quantity
Tasmanian buyers	Aust. salmon, garfish, flathead, banded morwong, wrasse
Melbourne fish market*	garfish, calamary, pike
Rock lobster fishers (bait)	barracouta, Aust. salmon, leatherjacket
Local mongers, punts, butchers	Aust. salmon, b. warehou, mixed net fish#
Own bait	Aust. salmon, couta, mixed net fish^
Local restaurants & ‘pubs’	striped trumpeter, flathead, j. morwong
Direct to local consumers	flounder, gummy shark, flathead
Self, family and friends	mixed net fish#, barracouta, s. trumpeter

Regarding the live fishery, strong beach prices for a live product make value adding by fishers unattractive. A small number of specialised local buyers link live fish with a specific segment of the Sydney and Melbourne restaurant markets. By contrast, but for a similar gross return per kilogram of approximately \$10, a number of local fishers value add in the form of filleted catch, and retail into the local restaurant market.

If live banded morwong and wrasse are removed from consideration, approximately half the fishers in the sample were non-value adding locally. By this is meant that approximately half the fishers in the sample were selling to local *buyers* who then did any filleting, packing and freighting to on-sell the product into higher paying markets. Thus, any value adding was done by the buyer not the fisher. Such buyers were local in the sense of being located in Tasmania, but often they were not located in the region in which the fisher operated or in the place in which the fisher lived. These buyers were used due to convenience.

A range of species was non-value added locally including blue warehou, whiting, pike, mixed net fish (e.g. boarfish, bastard trumpeter and jackass morwong), garfish, flathead and calamary. In other words, not just low value fish were sold to buyers but high value fish such as calamary and garfish also. Price paid per kilogram to fishers non-value adding locally was low compared with value adding either locally or, for example, into the Melbourne fish market. For example, approximately \$4 per kilogram was paid by local buyers for garfish, whereas approximately double this price was available through the Melbourne fish market.

More than double the price was also possible by filleting fish for local consumption (a number of participants stated that, provided the product was fresh, local consumers were a market that was far from saturated). One participant demonstrated a contrast between price possible for one species of fish, mullet, depending on whether it was sold for bait locally (\$0.80 per kilogram), sold unfileted into the Melbourne fish market (\$2.50) or sold filleted into the local consumer market (\$4.50). Note, too, that a

substantial amount of fish was retailed by fishers direct to local consumers, often for cash or kind, or consumed by fishers and their networks of family and friends. In ten or approximately eight per cent of interviews, participants stated that they either bought or sold fish for cash. Generally, however, it was expressed that the so-called 'cash fish' market involving commercial fishers had declined in recent years, but that recreational fishers stood to gain much and lose little from selling fish, predominantly locally, with rock lobster fetching especially attractive prices. In 35 or 27.7 per cent of interviews, participants maintained that they knew of recreational fishers who sold fish for cash.

### **3.9 Expenditure**

Regarding regional expenditure by fishers in the sample, apart from a handful of large operators, most fishers ran operations that were cheap to set up and run compared with, for example, many operations in the commercial rock lobster fishery. As noted, many fishers worked out of an open aluminium boat less than six metres in length, and many worked on their own.

In 13 or 10.3 per cent of interviews, participants' entire expenditure associated with their fishing operation was in the region in which they lived and fished. In these cases, the specialised fishing gear that many other fishers bought from outside their region, principally nets, was self made (i.e. components used to make up a net were bought separately and the net was made up by the fisher), and electronic fishing aids were not used. Apart from specialised fishing gear and electronics, items purchased by most operators in the fleet were local to their region. Such items included fuel, groceries, general purpose gear, and ice, with fuel constituting the largest operating cost. Employment of boat hands and so on also drew predominantly on local labour markets. Not surprisingly given the previous section, a number of participants made the point that the scalefish fishery was important regarding local commodity chains. In other words, many local fishers caught fish locally using locally purchased items and local labour to value add a product locally for the consumer local market. In this way, demand, expenditure, employment and supply were all contained within a region, thus retaining flow-on effects and satisfying desires for occupation and consumption (clearly, outlets for fuel and so on consolidate profit outside a region, but they do at least constitute a local service offering local employment). Across the fishery, a common figure mentioned by operators regarding cost to catch scalefish per kilogram was one-third of the gross return (care needs to be taken here due to the diversity of operators in the scalefish fishery).

In summary, given that many in the fishery were low cost DIY operators, the local worth of the Tasmanian commercial scalefish fishery ought not be measured purely in terms of employment and expenditure, though both are important. For example, if the tonnages of those buyers located outside Tasmania or who export their fish from Tasmania are removed from that caught by fishers in the sample, approximately half the catch remained in Tasmania as either eating or bait fish (Table 3.6).

**Table 3.6 Approximate catch, value<sup>^</sup>, employment\* and local consumption for the Tasmanian commercial scalefish fishery compared with the abalone and rock lobster fisheries, 2000/01.**

<sup>^</sup>Per annum average beach price return to the fishery; \*For the scalefish fishery, estimated in terms of number of people rather than number of full time equivalent positions; #Includes cephalopods but not shark.

	Catch (tonnes)	Value	Employment	Local consumption
Scalefish#	1214	\$6	400	half (600tonnes)
Rock lobster	1500	\$50	577	one-quarter (375tonnes)
Abalone	2800	\$128	525	very little (3tonnes)

In other words, the production sector that is the Tasmanian commercial scalefish fishery – an important employment and expenditure sector in its own right – contributes significantly to a number of local economies relating to various levels of consumption as well as to other production sectors such as rock lobster regarding the provision of bait.

### 3.10 Holders of a fishing licence (Rock Lobster)

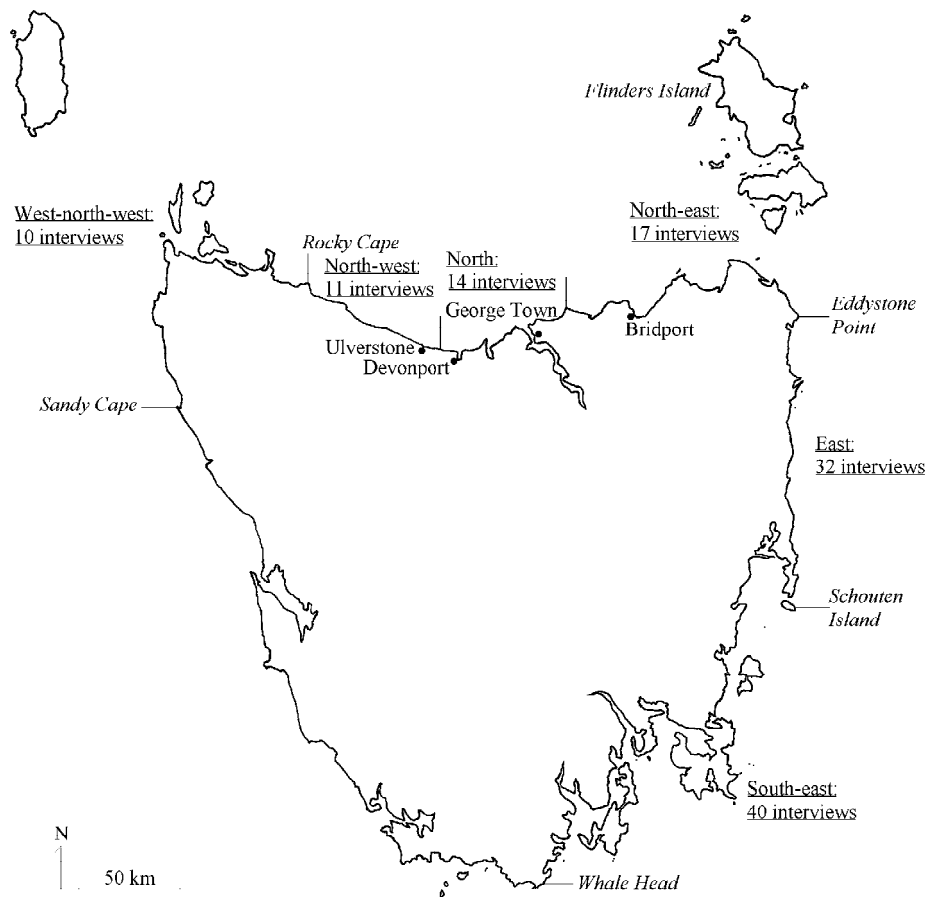
As noted, a letter of introduction and invitation to participate in the study was also sent to all holders of a fishing licence (Rock Lobster). In total, 215 letters were posted. Five responses were received. Four of these respondents were interviewed (contact and logistical difficulties conspired against interview in one instance). (Note that 20 interviews in the fishing licence (Scalefish) sample included participants who held both a SFA, B and/or C fishing licence and a commercial fishing licence [Rock Lobster].) A degree of consensus was apparent across these interviews. The view was expressed that fishing licences (Rock Lobster) were somewhat tangential to the scalefish fishery. By this view was meant that commercial rock lobster fishing was the principal activity of fishing licence (Rock Lobster) holders, and that the scalefish fishery was accessed across the range ‘not accessed’, ‘accessed for bait and personal use’ to ‘accessed for commercial purpose’ (moreover, much scalefish fishing in this licence category took place outside three nautical miles and was allowed out to 200 nautical miles). Many fishing licence (Rock Lobster) holders were held not to access the scalefish fishery, but nonetheless to have a traditional right to do so. The majority of those licence holders accessing the scalefish fishery was said to do so for bait and personal use. A minority of licence holders was considered to access the scalefish fishery for commercial purpose, primarily regarding striped trumpeter. Those interviewed maintained that this last group of licence holders, for which the scalefish fishery was an important commercial supplement, stood to be commercially disadvantaged by any diminution of their access right. Those accessing the fishery for bait and personal use stood to be financially disadvantaged in that they would have to purchase bait and fish for consumption. Participants agreed that if latent effort was to be addressed, it needed to be targeted in all licence categories, including fishing licence (Rock Lobster). As this category stood somewhat separate to the scalefish fishery, participants considered that further work with licence holders and their representatives in this category was required to ascertain an appropriate way to reduce latent effort. Participants stated that commercial users should be treated differently from non-commercial users, but that

how this was done needed further work regarding how commercial users were identified and licensed, payment for commercial use, the access rights of remaining licence holders (for bait and personal use only?), transferability and so on. (Complications include that much catch in this licence category, especially for bait and personal use, is not recorded, and that commercial catch is not required to be verifiable.)

## 4. The sample by region

### 4.1 West-north-west

The west-north-west region includes waters within three nautical miles of the Tasmanian coast from approximately Sandy Cape to Rocky Cape (Fig. 4.1).



**Fig. 4.1** Regions of the Tasmanian commercial scalefish fishery for the purpose of this report, and number of interviews conducted in each region

**Summary table: west-north-west**

Interview dates	24-28 June 2002	
No. of	In person	9
	Telephone	1
Uncontactable		1
No. of participants:	Male	12
	Female	-
Also in rock lobster fishery		4
Also in abalone fishery		2
Most common age range		51-55
Participant types:	Owner-operators	in 9 interviews
	Owner-operators/lessors	in 1 interview
SFA		in 2 interviews
SFB		in 4 interviews
SFC		in 4 interviews
First commercial fisher in family		in majority of
Full time in Tasmanian commercial scalefish fishery		in 2 interviews
At times fish outside region		in 1 interview
Boat: open aluminium less than 6 metres in length		in 3 interviews

NB: To indicate the licence predominantly being used, in cases where a participant holds both a SFA and a SFB licence, for example, the larger licence in terms of gear is counted; if two SFB licences are held, only one is counted.

All participants resided in either Marrawah, Smithton or Stanley. Apart from one operation that targeted wrasse and octopus, fishers targeted mixed net fish, primarily Australian salmon, gummy shark and bastard trumpeter. Flathead, striped trumpeter and barracouta were also taken using various types of hook gear. Again with the exception of the operation targeting wrasse and octopus, amounts of fish taken in the 12 months preceding interview were small, averaging approximately 750 kilograms per operator, these fish being DIY filleted for retail to the local consumer market; any income from scalefish fishing was therefore supplementary to a larger income stream such as, for example, from oyster farming. Difficulties with transport logistics meant that few operators participated in the so-called live fishery regarding banded morwong and wrasse. Less fishing was undertaken during winter months. Opinion of the health of stocks varied but tended towards stocks being in decline, especially regarding the scarcity of blue warehou (this decline was attributed to offshore trawling) and the reduced size structure of flathead (attributed to increased fishing pressure from local commercial fishers, as well as from recreational fishers residing along the north coast). (A point general to the sample is that many participants considered the minimum size for flathead to be too small.)

For nearly all participants in the west-north-west and, indeed, largely in the sample across the fishery, commercial scalefish fishing was a valued option in a peripheral labour market that offered a range of commonly part time practical or DIY employment. Though often not a lot of commercial fishing was being undertaken by a number of participants, their fishing activity, expenditure and sale were almost all local,

and the part time nature of their operation was considered to be dictated largely by the weather, as well as to be in the interest of fish stocks. In the context of declining stocks and increasing recreational effort, participants considered that the commercial scalefish fishery could not accommodate additional fishing effort in the form of new entrants. Latent effort in the fishery was therefore a concern. Any reduction in number of licences, however, required consideration regarding ownership criteria, with a strong preference for operators evident, and/or consideration of the conditions under which transfer of licences was permitted. In other words, a point general to the sample was that preferences were commonly expressed to the effect that the fleet be largely owner-operated and that licences be transferable only between previous, present and prospective fishers.

## 4.2 North-west

The north-west region includes waters within three nautical miles of the Tasmanian coast from approximately Rocky Cape to east of Ulverstone.

**Summary table: north-west**

Interview dates	8-12 July 2002	
No. of	In person	10
	Telephone	1
Uncontactable		-
No. of participants:	Male	14
	Female	1
Also in rock lobster fishery		1
Also in abalone fishery		1
Most common age range		36-40
Participant types:	Owner-operators	in 9 interviews
	Lessors	in 1 interview
	Buyers	in 1 interview
SFA		in 2 interviews
SFB		in 5 interviews
SFC		in 3 interviews
First commercial fisher in family		in minority of
Full time in Tasmanian commercial scalefish fishery		in 3 interviews
At times fish outside region		in 5 interviews
Boat: open aluminium less than 6 metres in length		in 5 interviews

NB: To indicate the licence predominantly being used, in cases where a participant holds both a SFA and a SFB licence, for example, the larger licence in terms of gear is counted; if two SFB licences are held, only one is counted.

All participants resided in settlements between Rocky Cape and Ulverstone. Unlike the west-north-west, targeting of species in the north-west was influenced by use of a number of small mesh endorsements (used to catch, for example, pike, Australian

salmon and blue warehou). Also unlike the west-north-west, transport logistics, both by aeroplane and by ship, were expeditious in the north-west to freighting fish to the Melbourne fish market, with garfish and calamary being targeted as a consequence. Larger local consumer markets also existed in the north-west, thus providing markets for mixed net fish such as bastard trumpeter and gummy shark. Flathead was also popular with local consumers. Apart from operations using small mesh endorsements and freighting a significant proportion of their catch to Melbourne, amounts of fish taken in the 12 months preceding interview were small, approximately 500 kilograms per operator on average, these fish being filleted for sale to local consumer markets. Filleting could be done either by the fisher or in the fish shop to which the fish were sold. In the majority of interviews, then, income from scalefish fishing was supplementary to a larger income stream such as, for example, from working in a trade. In no interviews were participants engaged in the live fishery. In five interviews, participants fished on their own. Opinions of stocks were almost unanimous, that non-migratory stocks were very low and that migratory stocks were being overfished elsewhere (principally, it was held, by trawlers offshore concerning blue warehou). Some faith was placed in cycles regarding a future upturn in various migratory species, and most participants considered that the ecosystem in north-west Bass Strait had benefited from the closure of Tioxide and the extension of Australian Paper's ocean outfall. Against a backdrop of improved water quality and growth in some marine flora, however, number of seals had increased, affecting both stocks and gear. The use of small mesh gillnets was also maintained to be hard on the size structure of various fish species. In short, stocks in north-west Bass Strait were said to be depressed, but conditions were favourable to their improvement should stocks be given a 'rest' in some way. No further fishing effort in terms of new entrants was considered to be sustainable.

### **4.3 North**

The northern region includes waters within three nautical miles of the Tasmanian coast from approximately west of Devonport to east of George Town.

**Summary table: north**

Interview dates	22-26 July 2002	
No. of	In person	13
	Telephone	1
Uncontactable		2
No. of participants:	Male	18
	Female	-
Also in rock lobster fishery		1
Also in abalone fishery		1
Most common age range		46-50
Participant types:	Owner-operators	in 10 interviews
	Buyers	in 2 interviews
	Owners	in 2 interviews
SFA		in 2 interviews
SFB		in 4 interviews
SFC		in 6 interviews
First commercial fisher in family		in minority of
Full time in Tasmanian commercial scalefish fishery		in 5 interviews
At times fish outside region		in 3 interviews
Boat: open aluminium less than 6 metres in length		in 5 interviews

NB: To indicate the licence predominantly being used, in cases where a participant holds both a SFA and a SFB licence, for example, the larger licence in terms of gear is counted; if two SFB licences are held, only one is counted.

All participants resided in a coastal settlement from Devonport to George Town (this stretch of coast includes Tasmania's second largest city, Launceston). Like the north-west, targeting of species was influenced by use of a number of small mesh endorsements (used to catch, for example, pike and Australian salmon). Also like the north-west, transport logistics, both by aeroplane and by ship, were expeditious to freighting fish to the Melbourne fish market, with garfish and some calamary being targeted as a result. Large local consumer markets also existed in the northern region, thus providing markets for popular eating fish such as flounder (primarily accessible to those with endorsements to fish in the estuaries in the region) and gummy shark. Filleting could be done either by the fisher or in the enterprises to which the fish were sold. Two migratory species were also taken in large quantities in the northern region in the 12 months preceding interviews, blue warehou and barracouta.

Amounts of fish taken in the 12 months preceding interview varied widely between operators. For example, a large predominantly Australian salmon fishing operation was based in the region, while at the other end of the range approximately 240 kilograms of flounder were taken in total by one operator. In between, operators without small mesh or estuary endorsements were taking approximately four tonnes of fish per annum, while those with such endorsements were taking tonnages into double figures. In the majority of interviews, then, income from scalefish fishing was the primary income

stream. In two interviews, participants were engaged in one of the live fisheries (wrasse). In five interviews, participants did not use a boat hand. As in the north-west, most participants considered that the ecosystem in Bass Strait had benefited from the closure of Tioxide and the extension of Australian Paper's ocean outfall. Against a backdrop of improved water quality and growth in some marine flora, however, numbers of seals and cormorants were said to have increased, affecting both stocks and gear in the case of seals. In four interviews participants reported changing their fishing practices due to seals, some abandoning using nets, others breaking off fishing if seals appeared (paradoxically, less net in the water was considered to be good for stocks). Relocating seals from south-eastern Tasmanian waters to the north coast was roundly protested, as well as questioned regarding its efficacy. The effects of various forms of aquaculture in the Tamar were also considered to be deleterious to the local ecosystem. Again as in the north-west, no further fishing effort in the form of new entrants was considered to be sustainable in the northern region of the fishery. Whether regarding an area, such as the Tamar estuary, or a species, such as Australian salmon, opportunities were considered to be finite and largely taken up at present; new entrants, it was stated, would simply reduce the catch of existing operators.

A point general to the sample is that more sedentary operators emphasised the value of access to a range of species via a range of fishing gear. In other words, 'diversification' was held to be important to catching fish living in or swimming through an area in the fishery. Being able to switch gear to target different species was also considered to make possible the 'spelling' of species and even some habitats in the fishery, a proviso being that for such spelling to be possible the fishery needed to continue not to suffer from over-competition. According to many participants in the sample, specialisation both limited fishers' options and failed to give target species a spell. However, specialised operators, who were more likely to follow their quarry beyond local areas, made a similar point regarding over-competition, namely that whatever self-regulation that was occurring in the fishery in terms of spelling areas or species would be undermined by additional competition. In other words, long-term stewardship of the resource would be undermined by the short-term imperative to secure catch if additional operators were to enter the fishery. With many licences latent in the fishery, a number of participants considered that capacity existed for opportunist entrants to chase a short-term increase in price or species abundance at the expense of both stocks and whatever ecosystem-sensitive fishing practices might exist at present.

#### **4.4 North-east and Flinders Island**

The north-east region takes in waters within three nautical miles of the Tasmanian coast from approximately west of Bridport to Eddystone Point and includes Flinders Island.

**Summary table: north-east and Flinders Island**

Interview dates	5-9 August and 16-20 September 2002	
No. of	In person	16
	Telephone	1
Uncontactable		2
No. of participants:	Male	23
	Female	4
Also in rock lobster fishery		7
Also in abalone fishery		1
Most common age range		51-55
Participant types:	Owner-operators	in 13 interviews
	Lessors	in 3 interviews
	Lessees	in 1 interview
	Owners	in 1 interview
SFA		in 5 interviews
SFB		in 7 interviews
SFC		in 4 interviews
First commercial fisher in family		in majority of
Full time in Tasmanian commercial scalefish fishery		in 6 interviews
At times fish outside region		-
Boat: open aluminium less than 6 metres in length		in 6 interviews

NB: To indicate the licence predominantly being used, in cases where a participant holds both a SFA and a SFB licence, for example, the larger licence in terms of gear is counted; if two SFB licences are held, only one is counted.

All participants resided in either Bridport, Musselroe Bay, Scottsdale or on Flinders Island. The main target species in the region in the 12 months preceding interview was garfish, the bulk of which was sold direct into the Melbourne fish market, or through George Town Seafoods Pty Ltd if operating from the north-east coast of mainland Tasmania. Calamary and Pike were also caught in the region for sale in the Melbourne fish market. (Note that a ruling by CASA that freight may not be carried in the passenger compartment of the types of aircraft servicing Flinders Island has required fishers either to abandon freighting small quantities of fish by aeroplane or to make up larger loads on chartered aircraft by fishing more or combining catch.) Popular eating fish such as flathead were also caught, filleted and sold to local consumers. With the cost to the operator of getting fish to market in Melbourne from Flinders Island being approximately \$2.50, low value fish such as mullet tended to be released, there being no sizable local markets for consumption or bait.

Amounts of fish taken in the 12 months preceding interview varied depending on the type of operation. For example, a large quantity of Australian salmon was taken by one operation for use as bait in another fishery, while approximately 250 kilograms of flathead were taken in total by another operation for retail filleted to locals and tourists.

In between, operators exporting to the Melbourne fish market were taking approximately 15 tonnes of fish per annum. In only three interviews, however, was income from scalefish fishing the primary income stream. In no interviews were participants engaged in the live fishery. In three interviews, participants did not use a boat hand. In the north-east, too, a number of participants considered that the ecosystem in Bass Strait had benefited from the closure of Tioxide and the extension of Australian Paper's ocean outfall. The abolition of board trawling in the fishery was also considered to have benefited flathead stocks. However, on the whole in the north-east, excluding Flinders Island, stocks were said to be low and the number of fishers to be at its maximum. An increasing number of seals was also reported and associated with declining catch and damage to nets.

A somewhat different situation was said to exist regarding Flinders Island. With extensive inshore fishing grounds, only a handful of commercial scalefish fishers and healthy habitat, stocks were said to be good. Some concern was expressed regarding the amount of garfish being taken, but a number of participants were chiefly concerned about the impact of beach seining on the benthos, especially in relation to flathead. Investigation was considered to be required here in comparison with seasonal push netting, which is not permitted at present. Mesh sizes, too, were said to be inappropriate to Flinders Island where smaller sizes were maintained to be warranted due to the absence of larger sized species such as blue warehou. A number of participants held there to be a case for possibly treating Flinders Island as a separate regulatory zone in the fishery.

Regarding intentions, a point general to the sample is that many participants were awaiting the outcome of the review of the management plan before taking any long-term decisions in relation to the fishery. A number of participants intended to use their licence as much as they were able in anticipation of a possible further 'show cause'. (Note that in such an atmosphere there is a temptation to overestimate unverified catch.)

#### **4.5 East**

The eastern region takes in waters within three nautical miles of the Tasmanian coast from approximately Eddystone Point to Schouten Island.

**Summary table: east**

Interview dates	12-16 August and 2-6 September 2002
No. of interviews:	
In person	27
Telephone	5
Uncontactable	6
No. of participants:	
Male	41
Female	5
Also in rock lobster fishery	9
Also in abalone fishery	4
Most common age range	51-55
Participant types:	
Owner-operators	in 22 interviews
Lessors	in 2 interviews
Buyers	in 3 interviews
Lessees	in 3 interviews
Licence recently liquidated	in 2 interviews
SFA	in 4 interviews
SFB	in 15 interviews
SFC	in 10 interviews
First commercial fisher in family	in majority of
Full time in Tasmanian commercial scalefish fishery	in 15 interviews
At times fish outside region	in 6 interviews
Boat: open aluminium less than 6 metres in length	in 13 interviews

NB: To indicate the licence predominantly being used, in cases where a participant holds both a SFA and a SFB licence, for example, the larger licence in terms of gear is counted; if two SFB licences are held, only one is counted.

All participants resided in a coastal settlement from Binalong Bay to Saltworks, the two major towns being Bicheno and St Helens. The range of operators in the eastern region was not as wide as in the other regions discussed so far. The main target species in the region in the 12 months preceding interview was banded morwong, followed by wrasse. Concentration on banded morwong and wrasse was due to the eastern region being the principal location of the live fishery. In 12 interviews participants were involved in either catching or processing one or both of the live fish species. The bulk of the catch in the live fishery is bought by three Tasmanian buyers and sold into the Sydney and Melbourne markets for distribution to local, often Chinese, restaurants. For reasons of higher price per kilogram, larger average size and being easier to catch (using nets) and keep alive, banded morwong were targeted more than wrasse (which were fished with traps and/or hooks). Apart from the contentious issue of species based licences (many participants preferred that general fishing licences include the live fishery, or that the live fishery be accessed through one separate licence), the main issues raised regarding banded morwong concerned size limits, the taking of spawning fish, and there being too many licences. Most participants supported minimum and

maximum size limits, but were unsure of their efficacy. More research was said to be required in this regard. A number of participants considered that more research was also required to ascertain the effect of the legal take season on the sex ratio, size structure and breeding dynamics of banded morwong. Support was expressed for the season closure regarding banded morwong, but its timing was questioned. Most opinion favoured closing and then opening the season a fortnight earlier than at present. Protection of spawning fish was paramount in all views regarding this matter. With time of spawning possibly varying each year, the closure needed either to be longer to account for this variation or adjustable to it. Monitoring and response time regarding any adjustment, however, were concerns for a number of participants. More radical suggestions included closing banded morwong for six months due to spawning and this being the peak time of year for interactions with seals, and banning the taking of spawning fish altogether. Finally, some participants held that too many licences for banded morwong had been issued and that active as well as any latent effort needed to be removed from the fishery in the interest of maintaining stocks. Quota managing banded morwong was considered to be a possibility, but not one that was strongly favoured by participants.

Calamary and garfish were also targeted in the eastern region and sold into the Melbourne fish market. Flathead, jackass morwong and striped trumpeter were caught for local consumer markets. Given the large proportion of full time commercial scalefish fishers in the region, amounts of fish taken in the 12 months preceding interview were mostly in the tonnes across operations. In addition to the primary target fish noted above, fish also taken in tonnes per annum included bastard trumpeter, barracouta, leatherjacket and mullet. Income from scalefish fishing was the primary income stream of participants in nearly half the interviews. In 12 interviews, participants did not use a boat hand.

Considerable concern was expressed by those interviewed in the eastern region regarding both stocks and the number of fishers. In general, stocks were said to be low and the number of fishers to be at its maximum. The live fishery, especially banded morwong, was considered to be under substantial fishing pressure. This pressure was held to be from a combination of fishing practices, the licensing arrangements under which fishers operated and an increase in the number of seals. A number of participants maintained that fishers were prone exclusively to target live fish in circumstances in which the most financially attractive fish, banded morwong, was caught using gear, i.e. nets, out of which an estimated approximate average of half the catch could be lost to seals. Moreover, many valuable single species licences were either fished full time by owner-operators to maximise income and catch history or fished full time by lessees with lease payments to make. (Species based licences were objected to at times not just because they impinged on the diversification of general fishing licences but because they were usually associated with an increase in licence value that could translate into increased pressure to fish. Market value of licences, as well as the legal status of licences, once created, were difficult to unmake. Market value of licences tended to intensify fishing in an environment of questionable sustainability, and escalate entry costs beyond the affordability of many fishers, especially once sustainability [associated with long-term confidence in the availability of the resource, making possible long-term payment horizons] was achieved.)

An increasing number of seals was also associated with declining catch and damage to nets in other areas of the fishery. One reason given in favour of general licences or diversified licence packages, additional to obviating the kind of fishing concentration occurring regarding banded morwong, was that gear could be switched to minimise seal interactions. A number of participants emphasised that CPUE in relation to a number of species was likely to be influenced by the increase in seal numbers due to a combination of an increase in the amount of fish taken by seals and due to fishers shifting away from using nets. Some participants maintained that, but for their increase in catch lost to seals, their CPUE would have been stable over time. If most concern was expressed by operators in the live fishery regarding banded morwong, operators using general fishing licences roundly considered bastard trumpeter to be in decline in the net fishery. Flathead, too, were said to be less numerous and to be a population in which size structure appeared to be diminishing. Blue warehou were reported not to have appeared in the region in exploitable quantities since 1999, and calamary were considered to be overly targeted. One positive note was that after an absence of some years barracouta had been evident in the region in exploitable quantities in the 12 months preceding interview.

#### **4.6 South-east**

The south-east region takes in waters within three nautical miles of the Tasmanian coast from approximately Schouten Island to Whale Head.

**Summary table: south-east**

Interview dates	June and October 2002	
No. of	In person	32
	Telephone	8
Uncontactable		1
No. of participants:	Male	46
	Female	-
Also in rock lobster fishery		8
Also in abalone fishery		4
Most common age range		46-50
Participant types:	Owner-operators	in 32 interviews
	Lessors	in 3 interviews
	Buyers	in 1 interview
	Lessees	in 2 interviews
	Owner-operators/lessors	in 3 interviews
SFA		in 11 interviews
SFB		in 19 interviews
SFC		in 7 interviews
First commercial fisher in family		in majority of
Full time in Tasmanian commercial scalefish fishery		in 23 interviews
At times fish outside region		in 4 interviews
Boat: open aluminium less than 6 metres in length		in 15 interviews

NB: To indicate the licence predominantly being used, in cases where a participant holds both a SFA and a SFB licence, for example, the larger licence in terms of gear is counted; if two SFB licences are held, only one is counted.

All participants resided in a coastal settlement from Triabunna to Lune River (this stretch of coast includes Tasmania's capital city, Hobart). Being a diverse region of the fishery in terms of grounds, there was a wide range of operators in the south-east region. For example, the largest vessel in the fleet, though only a part time operator in the fishery, was operated out of Hobart, as were the principal Danish seine operations. The main target species in the region in the 12 months preceding interview were calamary, garfish and banded morwong. Wrasse and gummy shark were also targeted. If the eastern region could be considered to be somewhat characterised by fishing for banded morwong, the south-east region was somewhat typified by fishing for calamary. In spring 2002 some trends in the calamary fishery were intensified as operators continued to enter the fishery in search of easy catches and a beach price that had approximately doubled since spring 2001. The result was at times heated competition to access the primary seagrass spawning grounds dotted between Great Oyster Bay and the Mercury Passage. It was this so-called spatial conflict, rather than concern about stocks, that prompted many participants to urge that trends in the calamary fishery be addressed by fishery managers.

In some respects, activation of fishing effort in response to upwards movements in market price and/or species abundance is exemplified by the calamary fishery in 2002. With many more general licences existing than being used to fish for calamary in 2001, fishery managers were largely powerless to regulate entry to the fishery once catchability, abundance and an increased market price became increasingly common knowledge in 2002. A number of participants therefore suggested that a separate licence be created for calamary. However, many participants were of the view that establishing any species based licence was not possible without difficulty. The principal point at issue was how to allocate any such licences. Catch returns were not yet required to be verified, and recent entrants and diversified fishers – i.e. operators who did not fish for calamary whenever possible but spread their effort across other species – stood to be disadvantaged in many forms of retrospective ‘show cause’. Assuming licences could be fairly allocated, their status regarding ownership and transferability was also contentious (a ‘use it or lose it’ non-transferable annual permit for so-called full time calamary fishers, with a trip limit for all remaining operators, was one option suggested). Further complicating this situation were so-called Ministerial warnings subject to varying levels of publicity and different interpretations; possible effort shift onto other species such as garfish; and spatial effort shift in the event of any areal closures. Given the introduction of a species based licence for calamary to be problematic, neither stock decline nor habitat destruction to be an issue, and that the primary problem was said to be fractious relations between some fishers at peak fishing times on favoured fishing grounds, perhaps the most straightforward approach might be for fishery managers to request that marine police have a presence in the area for the peak fishing months concerned.

As more than half the fishers interviewed in the south-east region operated full time in the commercial scalefish fishery, amounts of fish taken in the 12 months preceding interview were mostly in the tonnes. In addition to the primary target fish noted above, fish also taken in tonnes per annum included barracouta, flathead, striped trumpeter and gummy shark. Income from scalefish fishing was the primary income stream of participants in over half the interviews. In ten interviews, participants did not use a boat hand. Concern was expressed by those interviewed in the south-east region regarding the overall health of the fishery. Stocks were said to be low by operators who had been in the fishery sufficiently long to recall times of greater abundance. Observed changes in habitat and conditions included an increase in water temperature, a decrease in various species of kelp and changes due to aquaculture. Environmental fluctuations appeared to be greater (e.g. regarding the wind regime) and whatever cycles of growth or abundance were said to exist seemed harder to predict. No commercial species was said to be a pristine resource and size structures were down across the fishery. Some species were held to be especially scarce such as bastard trumpeter, blue warehou (attributed to offshore trawling) and jackass morwong. School shark were said to have declined considerably, and concern was also expressed regarding striped trumpeter. Banded morwong were considered to be being heavily exploited and were said to require careful monitoring. Species or areas in the fishery held to be stable were said to be so largely due to lack of over-competition for the resource (licences or endorsements limiting access to species, areas or gear [e.g. Danish seine] were said to be of assistance in this regard). Areas in the far south of the region were among the least fished. The ability of the fishery to accommodate additional operators was roundly questioned, especially in the more accessible (to both commercial and recreational fishers) and sheltered easterly areas of the region. As in

other regions of the fishery, an increasing number of seals was associated with declining catch and damage to nets, one positive for stocks perhaps being that in total less net was being used less as a consequence.

#### **4.7 West and King Island**

Interviews were not conducted with licence holders with recorded catch since 1998 with a postal address on either the west coast or King Island. This omission was due to the low number of operators identified. Four fishers were evident on the west coast, and at least two of these operated primarily in the commercial rock lobster fishery. Only three licence holders active in the commercial scalefish fishery at some time since 1998 according to recorded catch existed on King Island, with at least two of these being mainly engaged in rock lobster fishing.

#### **4.8 Licence holders with recorded catch since 1998 residing in mainland Australia**

Fifteen licences with a postal address in mainland Australia showed recorded catch since 1998, 14 in Victoria and one in Queensland. No holders of these licences responded to the universal invitation-by-letter to participate in the research. No licence holders in this group were interviewed as, with time and resources limited, a decision was taken to concentrate on generating a sample made up of operators residing in Tasmania.

## **5. Discussion and conclusion: principal issues relevant to the review of the 1998 scalefish fishery management plan**

### **5.1 Latent effort**

As set out in the introduction, a major area for exploration in the review of the 1998 scalefish fishery management plan is the existence of more licences and gear in the fishery than are actually being used. Though a number of participants distinguished full from part time operation in the fishery, concern in this section is only with licences with no recorded catch since 1998. Moreover, should a decision be taken to reduce latent effort, a licence holder with no recorded catch but who operates in another fishery, or who represents industry, may usefully be considered separately from a licence holder with no recorded catch in any fishery.

Put simply, in only two interviews did participants maintain that latent effort was not an issue in the fishery, the non-prospective argument being that gear out of the water was good for stocks. In 57 or 45.2 per cent of interviews, participants were unequivocally of the view that there existed too much latent effort in the fishery and that this effort needed to be removed in some way. (Questions in interviews were open-ended. Participants were not asked to be 'black or white' about any issue. Consequently, this percentage of strong views against latent effort can be considered significant. Many of those in the 'it depends' category regarding latent effort were of a similar view, but preferred to wait until a proposal regarding its reduction was put forward before they committed themselves unequivocally to a position.)

It was considered that latent effort needed to be addressed before actual effort could be tackled, catch verification being said to be crucial to an accurate assessment of actual effort by participants in 46 or 36.5 per cent of interviews. A number of participants made the point, however, that implementing catch verification was no simple matter in a fishery in which many operators were artisanal and part of the informal economy.

In over half the interviews participants considered that, though latent effort could be activated to the detriment of the fishery at some time in the future, its removal was not a simple issue. The recent origin of the latent effort issue was said to be the introduction of the 1998 scalefish fishery management plan. Regarding the process of *allocating* licences, participants protested this introduction in 52 or 41.2 per cent of interviews. Unverified catch returns were held to have been used relating to fishing years that were arbitrary at the scale of the individual operator and disadvantaged recent entrants and diversified fishers. Many genuine operators considered themselves to have been 'hard done by' the allocation process, while those who were said to have falsified their catch returns were considered to have been rewarded. Ultimately, however, nobody holding a licence prior to 1998 was excluded from the fishery by the management plan, SFC licences acting as something of a default category for those with little or no catch history. Therein lay part of the problem according to participants in 21 or 16.6 per cent of interviews, i.e. that too many *licences* were issued in 1998. With too many licences came too much gear 'on the books' in the fishery, though the majority of participants considered the amount of gear on a licence in each category to

be ‘about right’ (in 17 or 13.4 per cent of interviews, however, participants opposed the translation of hook-caught catch to net gear in 1998).

The aims being to specify types and amounts of gear, which entailed a reduction in the amount of gear some fishers had been using, and to cap rather than reduce the number of licences, the 1998 management plan, then, included all previously existing scalefish licences, whether a licence had been used recently or not. (In a number of interviews, participants suggested that, with gear limited in 1998, FLV limitations might be relaxed. Replacing FLV0-6 metres with FLV0-10 metres would satisfy the wishes of most of these participants to upgrade to a larger vessel. A 10 metre limit in a number of interviews was considered still to be necessary as a brake on possible ‘overcapitalisation’ in the fishery. Care needs to be taken here, however, regarding any of those who may have paid to increase their FLV from 0-6 to 0-10 metres.) Taken together with the existence of some dubious catch returns, licences are evident in each category that have not been used in the life of the present management plan (leased licences are considered to have been used). As noted, such licences were clearly held to be a complicating factor in the future management of the fishery by participants in 45.2 per cent of interviews. As noted, too, should a species’ market price rise substantially, as occurred in 2002 with calamary, or stocks appear in quantity, as is hoped may occur with blue warehou, fishery managers are largely powerless to prevent the mobilisation of effort in the interest of stocks. Many participants held this situation to be unacceptable, and suggested that the overall structure of licences needed to be adjusted better to reflect actual effort in the fishery. Such a structure, it was maintained, would make possible more direct management of the fishery.

## 5.2 Ownership

Latent effort, then, was said to be needed to be removed across *all* licence categories, not just regarding SFC licences, with banded morwong licences and fishing licences (Rock Lobster) also being mentioned. This suggestion, however, encountered a paradox according to many participants, that in reducing the number of licences the value of remaining licences was likely to increase and therefore raise the financial hurdle already facing prospective fishers. The issues then became what type of licence holder was appropriate to the fishery and how licences ought to be transferred from one holder to another. In 80 or 63.4 per cent of interviews, participants stated that a licence holder should at least have fished their licence at some time; in other words, that licence holders ought to be owner-operators or former owner-operators (without discussing various meanings associated with the term ‘investor’ and how this term may differ from ‘speculator’, in 73 or 57.9 per cent of interviews the preference of participants was that investors not be allowed to hold licences in the commercial scalefish fishery [for a number of participants, latent effort was a euphemism for those holding but not fishing a licence on the speculation that it would become often increasingly worthwhile to lease or sell]). In 81 or 64.2 per cent of interviews, participants were of the opinion that what incentive existed to enter the fishery needed to be maintained and, if possible, built on. Many participants stated that, to orient the fishery around owner-operation, the leasing of licences ought not be allowed. Others, however, were of the view that leasing was a useful way for new entrants to gain experience before committing to buy into the fishery, as well as an appropriate way for retiring fishers to ease their way out of the fishery. One stipulation considered to be

worth pursuing, then, was that licence ownership be conditional on having leased in and fished a licence for a minimum of, for example, two years. Such a stipulation, it was hoped, would focus the fishery on use rather than on exchange value, with transfer occurring between those with fishing experience. Latent effort would need to be removed either prior to or simultaneously with the introduction of such a stipulation. According to many participants, latent effort needed to be addressed regardless of impacts on the value of licences or the prospects of new entrants, but that these impacts should be taken into account if structural adjustment was to be pursued responsibly in relation to present and future generations of operators in the fishery. Further work was required, according to a number of participants, concerning the formulation of principles according to which the fishery was to be responsibly managed.

### **5.3 Compensation**

If a decision was taken to reduce latent effort in the fishery, various positions were put forward by participants regarding compensation. Note that many participants differentiated compensation from buyback. Compensation was commonly perceived to apply involuntarily to licence holders with no recorded catch since 1998 who had not purchased their licence in the first instance. In 36 or 39.5 per cent of the 91 interviews in which comment was made regarding compensation, participants held that all licence holders in this situation should be compensated if their licence was recalled without choice. In the largest proportion of this group of interviews, participants considered only a 'sweetener' of some amount to be appropriate, rather than market value for a licence, possibly on a sliding scale across SFA, B and C licences and so on. (A number of participants stated that, though SFC licences with no boat attached were one area to begin targeting latent effort, all licence categories needed to be scrutinised.) On the other hand, in 18 interviews participants took the view that compensation should *not* apply to licences without recorded catch since 1998, while in 12 interviews participants stated that compensation should only apply if a licence holder had purchased the licence in question. In nine interviews, however, participants were of the view that not just latent but some active effort needed to be encouraged out of the fishery, and that active effort should be targeted through a voluntary buyback offering market value for licences (a buyback would presumably be pursued after the removal of latent effort). Regarding who should pay for any scheme, participants were roundly of the view that the Tasmanian Government should be the principal contributor, though many participants conceded that other beneficiaries, i.e. commercial and recreational fishers, should also contribute.

### **5.4 SFC licences**

Note that while many participants maintained that latent effort needed to be addressed across the fishery, most participants considered that SFC licences either should be or were most likely to be targeted first. Some participants held that SFC licences ought not have been created in 1998 and that these should all be recalled. The majority of participants, however, stated that those using their SFC licence should be treated differently from those holding licences without recorded catch since 1998. Whatever fishery managers' intentions in 1998, a number of SFC licences were being used to earn at least part of a living. For example, of the 34 SFC licence holders with recorded catch since 1998 who were interviewed, 14 operated full time in the

Tasmanian commercial scalefish fishery. In addition, in 13 interviews, participants' SFC licence was part of a package of fishing licences. Many participants therefore stated that users of SFC licences as well as holders of SFC licences who fished other licences ought to be considered differently from stand alone SFC licences without recorded catch since 1998. Recalling all SFC licences was predominantly said not to be a fair option. Indeed, some participants were of the view that those using SFC licences to make up the bulk of their livelihood should be assisted through such means as allowing different gear types to be carried simultaneously and making live fish licences attachable to SFC licences. Finally, a number of participants held that if SFC licences were to be made permanently non-transferable, fishery managers should consider formalising the ability to bargain using licence surrender, for example involving amalgamation or third party benefit.

## 6. Acknowledgement

Thanks are extended to all who participated in the research. Without the willingness and contributions of participants, this study would not have been possible. Moreover, the hospitality extended by participants helped make the research thoroughly enjoyable.

## 7. Reference

Gardner C, Frusher S and Eaton L (2001) *Tasmanian rock lobster fishery 1999/2000*. Fishery Assessment Report, Tasmanian Aquaculture and Fisheries Institute, University of Tasmania, Hobart.

Food, Agriculture and Fisheries

## Appendix 1 – Letter of introduction

Inquiries : Peter Trott  
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Our Ref :  
Your Ref :

31 May 2002

Dear participant in the scalefish industry

You may be aware that the Tasmanian Scalefish Fishery Management Plan recently underwent a review. A number of issues were identified as part of this review, including latent effort and licensing arrangements. To understand these issues more clearly it was decided that a socioeconomic profile of the fishery needed to be undertaken. Matt Bradshaw, a social researcher from the School of Geography and Environment Studies at the University of Tasmania will conduct this important examination of the fishery.

The main objectives of the examination are to gather and document socioeconomic information regarding the commercial scalefish industry. The views of industry participants regarding past, present and future management of the fishery will also be sought. Once these views and information have been collected, they will be used to form discussions concerning the future direction of the fishery.

The examination will help to understand and address the basic forces that may result in unsustainable levels of fishing effort and overcapitalised fisheries, while being aware and taking into consideration the socio-economic and regional impacts of such changes.

Crucial to this examination process is the knowledge and opinions of those in the Tasmanian scalefish industry. It is anticipated that the examination process will take up to six months during which Matt will talk with as many licence holders, skippers, processors, family members, deck hands and so on.

Unfortunately, due to time constraints it is not possible to contact and interview all participants within the industry. Instead, a sample of industry participants will be generated. It is also important, however, that all participants in the industry be given the opportunity to participate in the examination process. If you have any concerns or issues and wish to make certain of your involvement, you are invited to contact Matt Bradshaw on (03) 6226 2205, fax (03) 6226 2989 or e-mail Matt.Bradshaw@utas.edu.au. All communication will be treated in the strictest confidence.

Your participation in this matter will be much appreciated.

Yours sincerely

Wes Ford

DIRECTOR (MARINE RESOURCES)

## Appendix 2 - Interview questions for owner-operators

(NB: demographics; boat.)

### Fishing

How/when did you first start fishing (self-starter or family, transition [deckhand-skipper-own boat-any upgrades?-licence holder \$-additions \$-why each step], number of years fishing, any non-fishing-related qualifications)?

How, if at all, has your annual fishing pattern changed over time (species, areas, gear, timeframes)?

What has been your fishing pattern over the last 12 months (species, where, when fish [and why], gear, time of day/lunar cycle, effort compared with catch, day-trips, overnight [how long, geog.], why, etc.)?

How does this fishing pattern compare with years prior to the last 12 months (any change, what, why)?

What does your present licence package consist of?

In what proportions do you fish these licences?

To whom do you sell your fish at present (under what arrangements, average beach prices [last 12 months and currently], hold any fish)?

What, if anything, detracts from your enjoyment of your commercial fishing (what, over time)?

Do you pursue any other occupation when you are not fishing (what proportion does fishing constitute re annual effort and income at present, full-time, part-time)?

What are your intentions regarding your fishing operation (fishing, licences, any debt, any other operations, short and long-term)?

### Socioeconomics

Where is your 'home' port (how long has it been your 'home' port)?

What proportion of your annual catch do you unload in this port?

What proportion of your fishing-related expenditure is in this port (specify)?

Do you visit any other ports (where are they, what proportion of catch unloaded there/expenditure there)?

What economic/employment/other links exist between your fishing operation and your local community (specify)?

How many people related to your scalefish fishing operation do you employ (deck hands, skippers, etc., how paid [wage, percentage])?

### Fishery

What is your view of the general state of the fishery or fisheries in which you participate at present (habitat, any impact of other fisheries [species and jurisdictions])?

What is your view of trends in the general state of the fishery or fisheries in which you participate?

What is your view of the stocks that you fish at present (trends also)?

What is your relationship with and view of the role/impact of the recreational sector in the fishery or fisheries in which you participate at present (as well as over time)?

### Fishery assessment

What is your experience/awareness of fishery research?

What is your opinion of fishery research (any suggestions)?

In your view, how reliable are catch returns (yours, others, over time, suggestions to improve)?

What is your experience/awareness of fishery assessment?

What is your opinion of fishery assessment (issues)?

### Fishery management

What is your experience/awareness of scalefish fishery management?

What is your view of fishery management (past, present, issues, incl. policing)?

What do you consider to be management's intentions regarding the fishery or fisheries in which you participate?

Do you consider that your level of involvement in fishery management is adequate (avenues to be involved, what forms/levels of information/consultation are appropriate)?

What, if any, positive aspects do you associate with the last major management change in the scalefish fishery in 1998 (in general, in particular)?

What, if any, negative aspects do you associate with the last major management change in the scalefish fishery (in general, in particular)?

What, if any, aspects of present management arrangements need to be altered (fine-tuning: which, why, how)?

What is your view of the relationship between present management jurisdictions (Tasmanian & Commonwealth, does policy/fishing in Cwth fisheries affect you, are you considered/consulted, any suggestions)?

Do you have any suggestions/preferences for the future direction of the fishery or fisheries in which you participate?

What role, if any, ought compensation play in any restructure of the fishery or fisheries in which you participate (who qualify for compensation [how], who pays)?

Separate interview schedules were prepared for owners, buyers, boat hands and skippers but are not provided here due to repetition of the majority of questions as well as limited space.