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RATIONALIZATION OF THE ROCK LOBSTER INDUSTRY IN THE S.A. SOUTHERN ZONE

by

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1. INTRODUCTION

In March 1978 the South Australian Department of Agriculture and Fisheries issued a detailed and controversial report on resource management for the rock lobster fisheries of South Australia (Copes, 1978). The 'Copes Report' as it is popularly known recommended that a number of changes should be made to the management of the fishery. The most significant recommendations concerned the establishment of a 'buy-back authority' to reduce effort in the fishery's Southern Zone. The industry reacted strongly to the report, and on behalf of the Southeast fishermen's organizations the Australian Fishing Industries Council (AFIC), South Australian Branch, successfully requested that the government delay implementing any of Copes' recommendations pending the outcome of a major socio-economic study of the industry in the Southern Zone. AFIC commissioned The Centre for Applied Social & Survey Research (CASSR) at the Flinders University of South Australia to conduct this study. We are thus working for, and reporting to, fishermen.

This paper is a preliminary outcome of our research. In particular we discuss some of the problems of the rock lobster fishery in the Southern Zone, the role of the fishery in the regional economy of the Southeast, and fishermen's attitudes towards management controls and effort reduction proposals for the industry. The authors emphasise that this paper is a preliminary discussion of a small range of only some of the data that we have collected and is not a definitive analysis of the problems of the fishery and the full implications of management strategies aimed at effort reduction. In particular we should note that our preliminary results only concern skippers and not their deckhands. Note also that all statistics on the volume of the catch, its value, and cost of operations of boats are taken from the South Australian Department of Agriculture & Fisheries (Fisheries Division) annual statistical reports or the Copes Report.

2. THE DEVELOPMENT OF THE FISHERY

Crayfishing in South Australia dates back to the 1870's but the fishery did not really take-off until after World War II when the South Australian Fishermens Co-Operative Limited (SAFCOL) and other fishermans' co-operatives were formed and entry to the U.S.A. market was attained. Until the mid 1970s, the rock lobster fishery was the most important sector of the fishing industry in South Australia when it was surpassed by prawn production. In 1975-76 the gross value of the rock lobster catch was $6.35 million (14.5% of the Australian total) from a catch of 2,228 tonnes. This represents about one-third of the State's fish catch, and over recent years the South Australian lobster catch has represented between 15 and 23% of the total Australian output.

The rock lobster industry was buoyant up to the mid 1960s owing to good prices and a buoyant export market. Activity, measured in terms of pots lifted then exceeded over 3,150,000 p.a., an expansion of effort of 29 over 18 years but the catch only expanded by a factor of only 2.5

to 2,837 tonnes, productivity dropped from 10.4 kgs. per pot lift to 0.89 kgs. (Copes, 1978:8). (Fig. 1) Since 1967-68 entry of new boats to the industry has been restricted and in 1971 legislation placed constraints on the number and distribution of pots.

Despite these measures, however, effort in the industry continued to increase mainly due to new technology. While the total catch is largely dependent on natural conditions, the demographic and growth characteristics of the lobster resource, seasonal weather variations etc. and the government-determined size limit, there has been a redistribution of the catch to those possessing the new technology and an overall real increase in operating costs due to increased competition for a static or even declining fish population (by 1976-77 productivity was down to 0.82 kg. per pot lift, though this had fluctuated over the preceding decade up to as much as 1.03).

3. WHY THE FISHERY IS IN TROUBLE IN THE SOUTHERN ZONE: THE COPES REPORT RECOMMENDATIONS

The basic reason for declining individual productivity in the rock lobster fishery in the Southern Zone is an over-supply both of boats and pots resulting in increased pot-lifts for decreased yields and declining productivity. As a result the real incomes of fishermen, both absolutely and relative to other sections of the community, have, in aggregate terms, fallen. The data support these generalizations. They show how between 1953-54 and 1976-77, return per pot lift (in constant $ terms) fell from $4.69 to $1.34 (Fig. 2).

As input factors have risen at a faster rate than inflation, the net loss per pot lift is greater than the data indicates. The net return to owner-skipper's capital and labour also fell, appreciably between 1970-71 and 1973-74 (Fig. 3). Increased capitalization - including the price paid for authorities - and increased factor costs are the major causes of these trends. At the same time the price received for live crayfish has not increased at the same rate as the costs, resulting in a cost-price squeeze, causing a decline in real incomes.

This was the background to the industry's request to the S.A. Department of Agriculture and Fisheries to take appropriate action, and led to Copes Report.

Copes considered that, with appropriate management of the fishery, it would be possible for increased net returns to be obtained by fishermen. He suggested that the present division of the fishery into Northern and Southern Zones be continued, and that separate management strategies be applied. Any management strategy for the rock lobster fishery should also include:-

1. An Effort Management Authority (E.M.A.) made up of industry and government representatives, to establish a management programme to control fishing effort and achieve a satisfactory balance between fishing effort and yield.

2. That, in the Southern Zone, the E.M.A. should achieve a satisfactory balance through a "buy-back" scheme which would get some boats out of the industry by means of "generous licence withdrawal bonuses and guaranteed compensation for retired vessels and gear".

3. That this "buy-back" scheme be financed through the use of a resource use fee levied on individual pots. Initial bonuses and compensation being financed through loans.

4. That, in future, authorities are not transferable on the open market, but that a proportion of retired licences be made available according to the length of time an individual has spent in the industry.

5. That smaller units should be made more efficient through the allocation of additional pots.

The crux of Copes' recommendations was the voluntary "buy-back" scheme. He claimed that a "buy-back" scheme would result in substantial returns to those remaining in the fishery by progressively reducing the number of boats, and increasing the average pot allocation to those remaining. An amount of $2 to $3 million would be required. The "buy-back" would, over time, be financed by those remaining in the industry. Due to the uncertainty of participation and outcomes, it was recommended that effort be reduced by one-third initially. Most subsequent debate in the industry has centred on these recommendations. The proposal was the interim change, the least drastic of three strategies Copes recommended (Table 1).

While fishermen in general agree that some changes are necessary in the fishery, their response to Copes' proposals has been mainly unfavourable. Much of this is due to the complex nature of the Copes Report which is written in a highly technical manner, but "opposition" is also due to fears over the uncertainty of the future, likely increases in fees to pay for the "buy-back" scheme, problems concerning non-transferability of licences, distrust of government involvement in fishery management, and concern over the possible social and economic effects effort reduction will have on the fishing ports.

4. FISHING IN THE SOUTHEAST REGIONAL ECONOMY & IMPLICATIONS OF EFFORT REDUCTION

The economy of the Southeast is based on primary industries and associated processing. Its total population at the 1976 Census was about 51,600 - 4% of the State's total or 17% of the non-metropolitan total. There is a relatively young age structure, net migration loss, but overall a 1% annual increase mainly in Mt. Gambier and the larger towns.

The main regional centre of Mt. Gambier (19,292 population) with Millicent (5,471) and Naracoorte (4,571) as the other two major towns. In addition to processing primary products they act as service centres. Port MacDonnell (population 700) is a specialist fishing port linked to Mt. Gambier and is that city's main seaside recreation centre. Of the other ports Robe (population 500) and Kingston S.E. (1,250) have the most diversified economies. Robe is an important tourist resort and is one of the oldest settlements in the State. It is estimated that its population increases by a factor of 4 during the height of the summer tourist season. Kingston is less important as a tourist resort but serves a larger role as a sub-regional service centre. The other ports, Beachport (400), Southend and Carpenter Rocks, are almost exclusively fishing ports, though the first two attract tourists in the summer. Boats also fish out of other "localities" such as Cape Jaffa, Nora Criena, Blackfellows Caves and Nene Valley (see Fig. 4).

Lack of adequate data (e.g. no regional accounts) means that it is impossible to analyse adequately regional economic structure and performance within Australia. It is therefore not possible to do more than make some very general and tentative statements about the role of a specific industry in a regional context.

Estimates of the regional work force in 1977 give a figure of about 23,700 of which 1,500 were unemployed. The work force had grown by 14.6% in the 1971-76 period due mainly to increased participation in the work force by adult females. A recent report concluded that this situation presents a problem and that there needs to be a substantial increase in the depth and width of employment opportunities in the region. (S.A. Department of Economic Development, 1978: Chapter 6).

Of the primary industries, almost 5,000 are employed in agriculture and less than 200 in mining (1976 Census). There is a diverse production of crops covering cereals, feedstock crops, vegetable oil crops, horticulture and viticulture. Major livestock production is for wool, beef and dairy cattle, eggs and poultry, meat and apiculture. Recent years have witnessed fluctuations and adjustments in the rural sector and it is difficult to predict future prospects, but it is not likely that there will be significant growth in many of these activities as they all compete for the same land and increased activity will necessitate increased intensity of use.

Forestry represents a major industry in the Southeast and is chiefly of exotic softwoods with some 80,000 hectares planted. This is likely to expand, but employment will not be likely to rise much above the 780 to 800 level.

In employment terms the fishing industry accounts for about 650 jobs or 3% of the region's work force (S.A. Department of Economic Development, 1978:91). Of these about 540 people are employed in fishing and 110 in fish processing. It is worth noting that these figures are substantially above the figures given in the 1976 Census (total of 245 persons!). This is due to a combination of factors - the Census night was in the middle of winter (i.e. the closed season), also a 50% sample of household returns could, given the size of the population, result in considerable error. Lobster fishing is by far the most important fishing activity, and the catch in 1976-77 was estimated at \$5.2m. in value. Shark and abalone are the only other small but significant fishing activities, though there is no other fishing. The major processing plant is at Millicent with smaller ones at Robe, Beachport, Southend, Carpenter Rocks and Port MacDonnell. Because of the seasonal nature of this activity, an additional 120 casual jobs are created by the fishing industry in the summer peak of the season. While the industry obviously has this direct employment effect, some indirect but virtually unquantifiable employment is created through multiplier effects, for example local fishing equipment supply services and boat repair activities. There is, however, also a high level of expenditure on supplies and services outside the region, so the indirect employment effects locally are probably small.

Other secondary sector activities in the Southeast are also important, mainly comprising agricultural processing but with low growth prospects.

The major processing employer is the timber and pulp paper industry, which account for about 3,450 jobs, but the growth of mechanization limits the likelihood of job expansion. Other manufacturing activities are chiefly textiles and clothing in Mt. Gambier (about 220 jobs), and engineering and metal fabricating and general manufacturing representing in total about 260 jobs in which expansion of employment is dependent on general expansion of the regional economy.

Turning to the tertiary sector, about 11,000 people are employed, which represents 49% of the Southeast Region's employment. Wholesaling and retail trades are the most important (3,880 jobs), followed by community services, health and education (2,400), building and construction (1,300), entertainment (1,250), transport and communications (1,000), services to business (800), and government administration (340). (S.A. Department of Economic Development, 1978:154).

Tourism is important to the Southeast, especially in some of the fishing ports, and it has been estimated that it accounts for about 10% of total regional retail sales. The total value of tourism in this region was estimated at $16m. in 1976. (S.A. Department of Economic Development, 1978:159).

In attempting to investigate the basic/non-basic ratios of employment in industry sectors in the Southeast, the S.A. Department of Economic Development produced the necessary figures. About 57% of the regions total employment is attributed to basic activities, and the basic/non-basic ratio is 1:0.98, a regional employment multiplier of 1.98 (S.A. Department of Economic Development, 1978: Ch.10). There are numerous problems of using this approach, including that of averaging rather than deriving a marginal multiplier, probable lack of validity of applications to an individual firm or activity at a specific location, and the instability of the multiplier over time, just to mention a few. On the basis of the data analysed, rationalization of the rock lobster industry effort leading to a decline in the number employed in the industry would be expected to cause the net loss of another 65 jobs in the region. (S.A. Department of Economic Development, 1978:206). The impact of job loss would be mainly localised in the fishing ports, where tourism and recreation activities appear to offer the only alternative sources of new employment. The development of alternative fisheries such as trawling would not be feasible for most fishermen without additional capital investment. In summing up the likely effects of effort reduction in the lobster fishery, the study had this to say:

> *"The ultimate impact this will have on the regional economy depends on whether fishermen leaving the industry migrate out of the region and whether they are able to recover this capital investment (represented by boat and equipment), or whether they stay to seek alternative employment or retire"*
> *(op cit P.121)*

5. METHOD

5.1 The Target Population

An attempt was made to survey all skippers of vessels with rock lobster authorities in the South Australian Southern Zone. There is some dispute regarding the adequacy of available government records to describe fully the existing authority holders, however it would appear that there are some 260 persons currently licensed to fish for rock lobsters. Of these some 247 have been interviewed (95%).

Two fishermen refused to be interviewed.

Failure to contact the outstanding skippers may be attributed first, to the fact that interviews were conducted during the "winter" season when many were not fishing. Second, some vessels were on the market at the time and their skippers were absent. Third, some vessels were elsewhere fishing for shark. Thus, while small, the non-responses may bias results. This point is taken up wherever appropriate in the Results section.

An attempt will be made to interview the remaining skippers before the final report is presented.

5.2 The Questionnaire

The brief required that opinions of fishermen be sought on issues relating to the recommendations of the Copes Report and other forms of effort reduction. In order to determine the sorts of issues that fishermen (as opposed to academics and fisheries administrators) considered relevant, a series of panel discussions were held with fishermen in each of the six ports.

The issues raised in these panels formed the basis for the questionnaire which covered a wide range of problems. Information was sought relating to their knowledge and opinion of the Copes Report itself, about problems in the fishery at present and about the way they fish. Respondents were also asked about what they would do if they left the industry, and how much they would be prepared to pay to stay in it.

The usual biographical information was also sought.

5.3 Procedure

Letters were sent to all fishermen telling them about the study and offering them the option of being interviewed at home or at some central location. As each of the fishing ports is small, following the panel discussions, the research team became relatively well known in each of the town's key institutions. To ensure even greater visibility each interviewer wore an identity label bearing his or her photograph. These factors, along with the knowledge fishermen already had that we were effectively working for them, ensured their willing co-operation. This, we believe, resulted in both a high response rate and, hopefully, valid answers.

Each interview was conducted individually by a trained interviewer. The modal interview time was 45 minutes.

6. RESULTS AND DISCUSSION

A large amount of data was collected from interviews with skippers, owners, crew and wives of fishermen. Information has also been collected from business people in each of the major towns. Only a selection of the data from interviews with skippers is presented here. The selection has been made simply on its apparent relevance to recommendations that have been made to Government to intervene in the economy of a significant region in South Australia. These recommendations were made on purely economic grounds and were supposedly to be implemented by some government iniatives. What has been sought from the data is the way those most concerned view such interventions. It is perhaps not surprising that the well intentioned moves of bureaucrats are sometimes misinterpreted. Perhaps it is the bureaucrat that should learn from these results. This statement is made in the full knowledge that many of the results presented here will appear internally inconsistent. In the real world we live in most people probably would appear irrational to economists and certainly irrational to some bureaucrats. The lesson we must learn is: They (whoever "they" are) are not necessarily wrong and, unless we convince them of the value of our intervention it may fail - regardless of its intrinsic worth.

6.1 Coping with Copes

Fishermen were asked if they had read the Copes Report. A positive response was recorded if they indicated that they had even looked at several pages of it. It is thus significant that one-fifth of skippers had not attempted to read the report that was of vital importance to their industry and that three of these people had not even heard of it. (It should be noted that the report made available to fishermen was an abridged version of the original - an edited selection of pages rather than of contents of the report. Thus the study grossly overestimated the number of people who had actually read the report.)

Over 50% of the fishermen who had read or discussed the Copes Report could see some good and some bad points in it, however only 9% favoured the report while one-third were totally opposed to it. It was not uncommon to hear the report described as a "Socialist" or even a "Communist" document.

In spite of apparent opposition to Copes Report nearly 90% of the fishermen agreed with Copes' proposition that there were too many boats operating in the Southern Zone. Typically comments of those who disagreed with this proposition related more to the rights of individuals to fish than to the economic viability of the fishery.

While there was rather overwhelming agreement that there were too many boats in the industry, one-quarter of the fishermen argued that none should be taken out of their home port.

In the Southern Zone as a whole however, one-fifth argued that no boats should be bought out, a further fifth opted for a reduction of less than one-third of the boats. The majority however (nearly sixty percent) appeared to agree with Copes that a third or more of the vessels should be bought out. Moreover, over 70% considered that a buy-back in some form was an appropriate way of reducing the number of boats. In spite of this fact only 16% indicated that they were definitely willing to sell to such an authority. A further 25% indicated that they could be interested in a buy-back scheme. Typically however, this response was of the form "I'll sell out if they make it really worth my while."

Copes had recommended that some of the pots removed by a buy-back should be redistributed to make those left in the industry more viable economically. The vast majority of fishermen disagreed with this proposition - typically on biological rather than economic grounds. (Clearly the appropriate government department has done little to explain the purpose of a buy-back and most fishermen may be excused for being confused in this regard.)

While most people disagreed with the notion of redistributing pots, nearly 35% said they would buy extra pots - mainly because they see themselves in competition with other fishermen. ("If others are going to work more pots. I guess I'll have to too!")

6.2 "The Blue Pot".

The panel discussions had indicated that many fishermen believed that one of the major problems in the industry resulted by some of their number using more than their legal quota of pots. In the survey 70% of fishermen saw overpotting as a problem in their ports. Nearly 14% of those asked to estimate the percentage of overpotting denied that there were any illegal pots used from their ports! However, one-third believed that the extent of overpotting was greater than 10%. Most fishermen were prepared to point to cases where others had used two and three times their quota of pots. The term"blue pot" has recently been coined to describe the illegal pot. (When asked by the Fisheries Inspector how the illegal pot happened to be in the water a fisherman replied - "It just appeared out of the blue.")

6.3 Who Pays?

An essential aspect of Copes' recommendations was that it would be financed by those remaining in the industry. It is thus highly significant that more than 50% said they would refuse to pay any additional licence fee if a third of the boats were removed. Most argued that they would like to see some additional returns before paying. Another common argument was: "If this scheme is so good, it is going to be better for fishermen in 30 years time - let them pay for it!"

6.4 Alternatives to Fishing

If bought out, 30% of fishermen stated that they would look for work in another fishery. Another 20% stated that they did not know what they would do. Ten percent said they would retire and 6% would return to a former trade. Seventy-six fishermen in answer to another question, indicated that they had some investments in the Southeast. Of these 21 had farming properties and 29 had other business investments. Thus, on the surface, it would seem possible that many of the 13% of fishermen who would like to turn to farming and the 6% who were looking to their other investments for support could be accommodated. However, it should be noted that those most likely to be "bought-out" are the uneconomic units - that is those that are less likely to have appropriate investments.

If one assumes that fishermen could leave the industry and take up alternative employment, it should be noted that, of the 66% who had worked before becoming fishermen only 25% had held positions which required some qualifications and less than 20% have trade qualifications. Nearly 50% of skippers had left school before age 15 and only 10% had remained at school to age 17 or more.

6.5 How to enter the Fishery

Copes expressed some concern regarding those who were involved in the industry and may wish to purchase boats (e.g. employed skippers, crew and sons of fishermen). Twenty-seven of the skippers interviewed were operating vessels owned by others. Of the 27 presently skippering a boat 17 intended buying their own boat some time in the future and 4 of these 17 were actively attempting to purchase vessels. (It is understood that 2 have bought boats since they were interviewed.)

It is quite clear that Copes' notion of a buy-back scheme would effectively preclude such people from entering the industry. It is true however, that some provision in the recommended buy-back scheme was made for such people to enter the industry in the long term.

6.6 Ownership of the Lobster Fleet

Any attempt to buy-back vessels should take into account the present ownership of the vessels. Thus one should examine such things as, who owns the vessels, how much is owing on them and how long before loans are repaid? Of those who operate their own boats nearly 45% still owe money on them and over 20% still have more than 5 years to go before they will fully own the boats. Almost 25% have upwards of $20,000 still owing. It is significant to note that of those responding to the question: "Did you experience difficulty in obtaining finance?" Eighty-four percent said "No". Several in fact claimed that the ease with which finance could be obtained was an important reason why there were many uneconomic units in the industry.

6.7 Sharking as an Alternative to Lobster Fishing

While all fishermen interviewed held authorities to fish for lobster, it is important to note that a large proportion (24%) did not fish exclusively for them in the 1978-79 season. In fact 3% (N=7) fished exclusively for shark. Local opinion holds that these shark fishermen are potentially the "best" crayfishermen and that, if they were to concentrate on crayfishing, other fishermen would notice the effect. It is true that each of these fishermen have the authority to use relatively large numbers of pots and while shark fishing remains a lucrative industry, other fishermen enjoy the benefits of this quite considerable "effort reduction" in lobster fishing. Some shark fishermen have offered to surrender cray authorities if the present crayfishermen would relinquish their traditional right to fish for shark (i.e. make sharking a limited entry fishery). On the surface this would appear an attractive alternative to a buy-back. However, the majority of fishermen rejected this proposition.

6.8 Vessels on the Market

The potential effectiveness of a buy-back scheme may be estimated on the one hand by the number of boats presently on the market (i.e. those who are immediately prepared to sell to the highest, if any, bidder). One should also note that many vessels are on the market because the owner wishes to "trade-up". The survey showed that at least 20 vessels (8%) were currently on the market. (This figure may even be an underestimate as result of a non-response bias.) The majority of the boats on the market however, tend to be smaller and in the lower price range, lending support to the notion that many skippers are attempting to "trade-up".

All fishermen were asked to estimate the value of their boats and authorities on the present market. Of those responding one-fifth valued their boats and authorities at $20,000 or less, another fifth at over $60,000. The total estimated value of the fleet with authorities (260 vessels) based on these figures is approximately $10,000,000.

7. SOME CONCLUDING COMMENTS

The usual comments relating to the preliminary nature of the analysis and the limited set of data used, of course, apply. Thus it is too early to make any definitive conclusions from the study. However, there are a few obvious conclusions that anyone concerned with the problem of introducing important social changes in some region would reach. Clearly, the fishermen rejected a report which was designed to alleviate problems in their industry. Many had not read the report for a variety of reasons and quite likely few understood it. The Copes Report clearly was written for a professional audience and the version made available to fishermen was not designed to make it more understandable to them. However fishermen generally agreed with Copes analysis of the problems in the industry - that is when they were asked about its recommendations without reference to the source of the recommendations.

It should be noted however, that many of the recommendations, regardless of how they were presented, were rejected by fishermen. It is possibly trite to note that any form of community intervention, which has not involved community input at all stages, is fraught with problems. The present situation is thus one in which there is little dispute regarding the nature of the problems or even its solution. The method of implementation is, however, seriously questioned and viewed with a great deal of suspicion.

One is also left with the feeling - which most would have predicted - that, from the individual fisherman's point of view, a buy-back scheme is an excellent idea - provided that my boat is not bought out and that it does not cost me anything! The ideas are no doubt commendable - how can they be implemented to the best advantage of all?

REFERENCES

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South Australia, Department of Economic Development, The Green Triangle Region, an economic development study, Adelaide, 1978.

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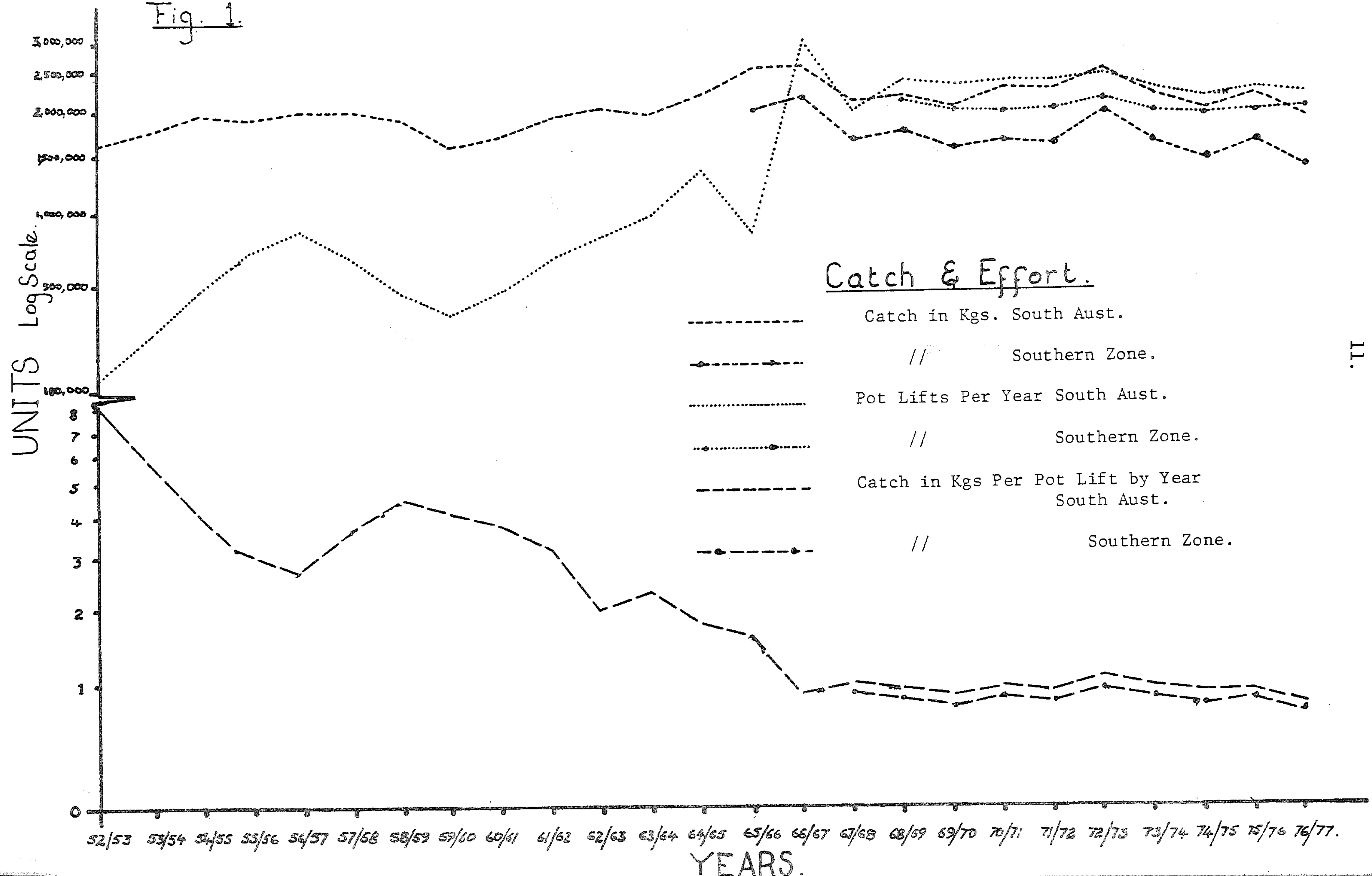
Catch & Effort.
Catch in Kgs. South Aust.
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Pot Lifts Per Year South Aust.
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UNITS Log Scale.
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YEARS.

Fig. 1.

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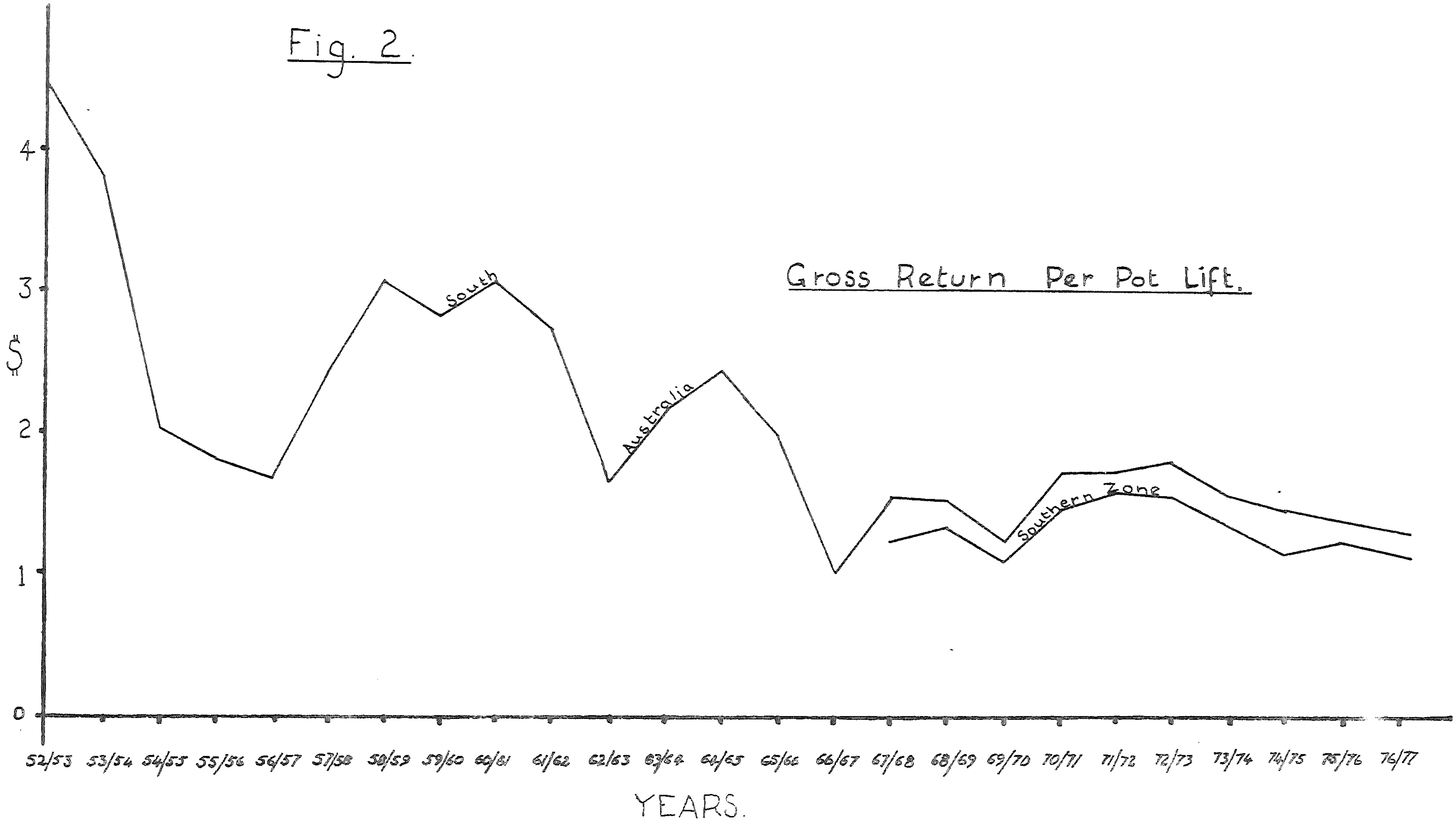
Fig. 2.
Gross Return Per Pot Lift.
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67/68
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76/77
YEARS.

151

TABLE 1: ALTERNATIVE OUTCOMES OF PROPOSED EFFORT REDUCTION VIA "BUY-BACK" SCHEME

	Present	Rent Maximization	Complex Optimum	Interim
Number of boats	265	75	127	190
Net Return $	-708,000	3,175,000	2,765,000	1,412,900
Catch kg.	1,633,000	1,480,000	1,590,000	1,633,000
		Involves some re-allocation of pots, bringing every boat to 70		

Based on Copes (1978)

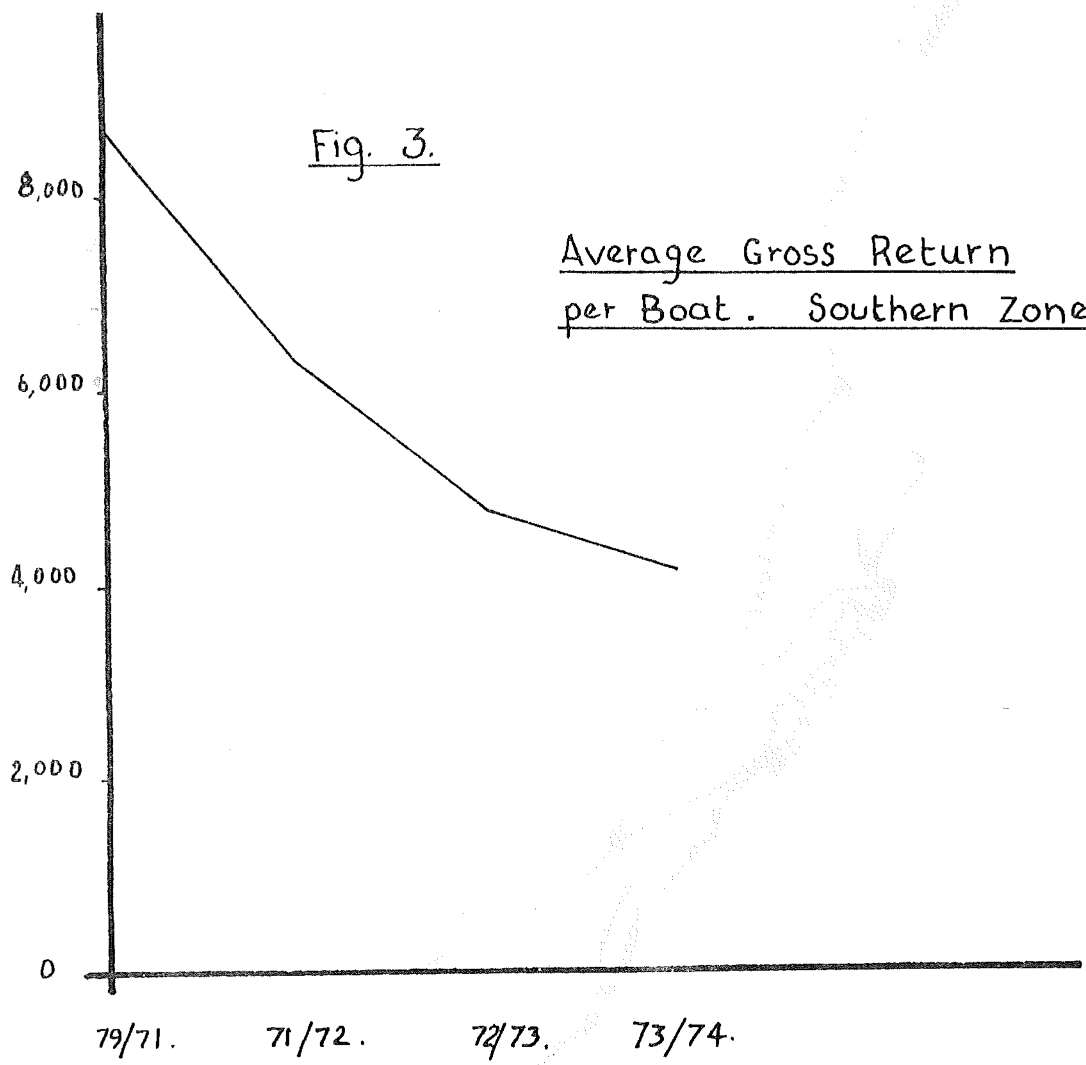
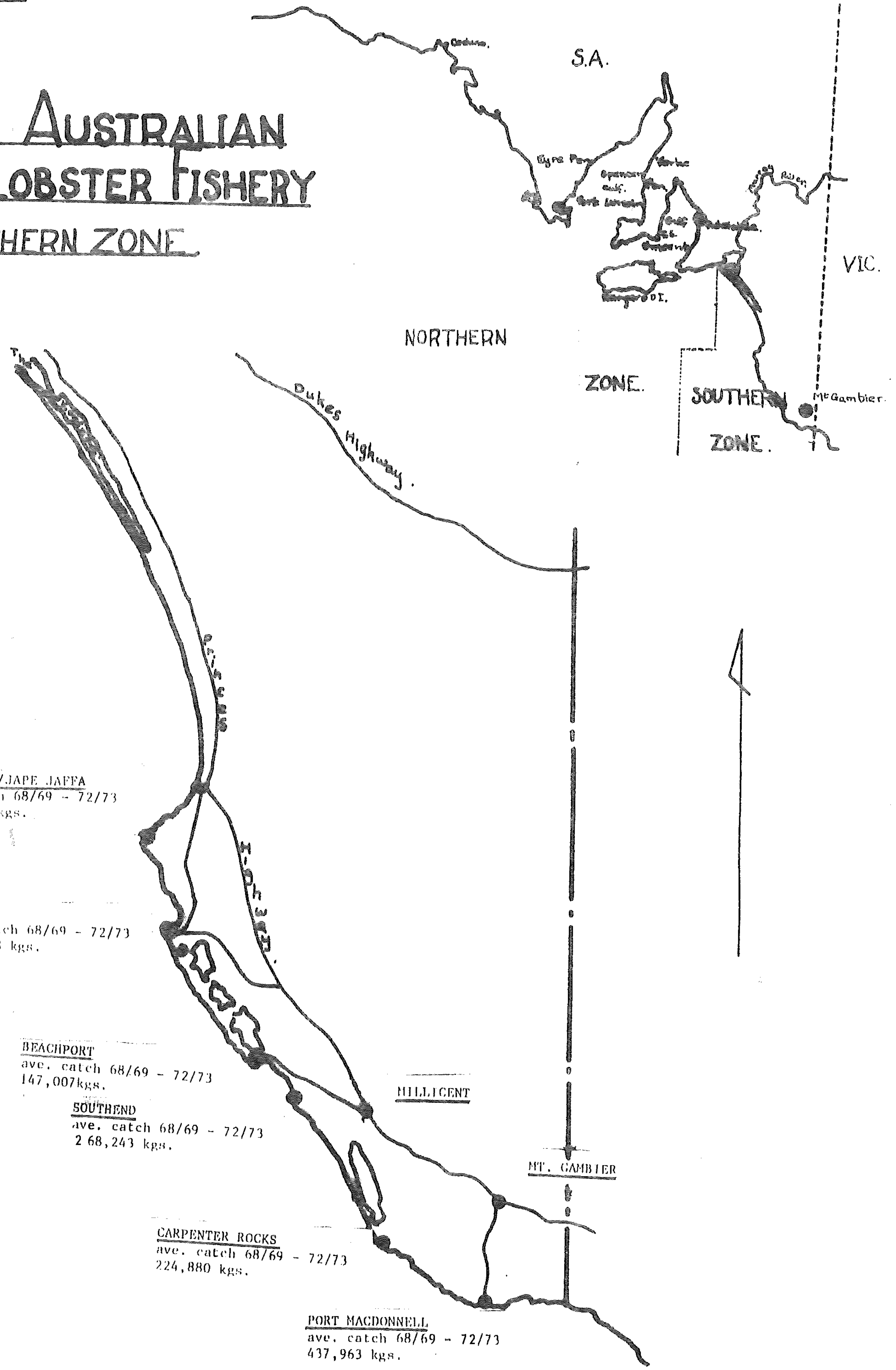


Fig. 3.

Fig. 4.

SOUTH AUSTRALIAN ROCK LOBSTER FISHERY

SOUTHERN ZONE



1979 SOCIO ECONOMIC SURVEY OF THE ROCK LOBSTER INDUSTRY IN SOUTH AUSTRALIA, SOUTHERN ZONE

DESCRIPTIVE SUPPLEMENT TO ONE WAY FREQUENCY TABLE PRINTOUT OF SKIPPERS RESPONSES (ALL PORTS)

All but a few variables derived from the questions comprising the skippers questionnaire have been included in this supplement. It is important to keep in mind, however, that many of the variables appearing here are more relevant when considered in terms of specific ports rather than on an aggregate basis.

The format of this supplement has been designed for easy reference to computer printout and questionnaire. The discussion on each variable merely highlights the main features of that variable with no attempt being made at this stage to interpret the responses.

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Question No.	Variable No.	Printout Page No.	Discussion
Quest. Cover	V2	2	Of 247 fishermen interviewed 208 (84%) stated that they were skipper-owners. 11% were skippers (non-owners), nearly 3% owners (non-skippers) and 4 (almost 2%) reported their being joint skippers.
Quest. Cover	V3	3	The number of fishermen interviewed in each port reflects the relative size of that port with Port MacDonnell being by far the largest of the six 'major' Southeast ports with 29% (72) of the total. Beachport with 9% is the smallest of the six ports.
Quest. Cover	V4	4	Whereas the previous table refers to only the major ports, this table indicates the specific port from where fishermen operate. The 'ports' appearing in this table that were arbitrarily assigned to the six major ports are (with major port in brackets): Cape Jaffa (Kingston), Nora Criena (Robe), Blackfellows Caves and Nene Valley (Carpenter Rocks), 'Other' - Racecourse Bay (Port MacDonnell).
Quest. Cover	V5	5	More relevant when considered in relation to specific ports.
1a	V8	6	194 fishermen representing nearly 79% of the total had read the Copes Report, 50 (20%) hadn't and 3 (just over 1%) had not heard of it at all. However, no indication was given as to whether the Report in question was the full-blown publication or the smaller preliminary report.
1b	V9	7	84% of those who had read one or other of the Copes Reports had discussed it with other fishermen.
1c	V10	8	Upon reading and discussing with others either the preliminary or expanded Copes Reports 19 (9%) voiced their approval of the report with a third (33%) being totally opposed to it. Just over half considered "the Report" to have some good points as well as bad points whereas 10 (5%) stated they had no opinion of "the Report".

Question No.	Variable No.	Printout Page No.	Discussion
2			The following 14 tables (V11 to V24) represent fishermen's views as to the extent of various existing factors being problems in their own ports. Although it is more appropriate to relate these views to specific ports it is nevertheless of value to look at the overall situation.
2a	V11	9	The price offered by processors for crays is considered by almost 1/3 of the fishermen interviewed to be no problem at all with 1/3 suggesting it to be a minor problem and a further 1/3 (35%) a major problem.
2b	V12	10	40% see amateur crayfishermen as posing no problem with 33% regarding it to be of minor and 26% of major concern.
2c	V13	11	A significantly high proportion (69%) state that the cost of gear is a major problem facing crayfishermen. 49 (20%) see the problem as being only minor with relatively few (28) regarding it as presenting no problem.
2d	V14	12	The majority (162 or 66%) see the getting of extra pots as not posing a problem with 31 (13%) being a minor problem. 48 (19%) view it as being a major problem.
2e	V15	13	Winter closure is not a problem according to over half of the fishermen. To 44 (18%) it is of minor and to 59 (24%) major concern.
2f	V16	14	As far as recruiting deckies is concerned nearly 70% do not regard it as being a problem, 43 (17%) a minor problem and only 30 (12%) a major problem.
2g	V17	15	As expected the greater proportion of fishermen feel that there are too many cray boats operating from their ports presenting a major problem, with the remainder being more or less divided as to the number of boats being a minor problem (17%) or no problem at all (15%)
2h	V18	16	The taking of undersized crays according to the fishermen is a problem but only 34% regarding it as major with 40% as minor. 61 fishermen representing 25% of the total state 'no problem'.

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Question No.	Variable No.	Printout Page No.	Discussion
2i	V19	17	Fuel costs are regarded by 172 (70%) to be a major problem in their port. Very few (24) report fuel costs to be no problem with 50 (20%) considering it to be only minor.
2j	V20	18	Pot lifting appears not to be regarded as a major problem with only 37 (15%) reporting so. The remainder are equally divided between 'no problem' (41%) and only a 'minor problem'.
2k	V21	19	96 (39%) regard port facilities as not posing a problem. On the other hand 67 (27%) and 80 (32%) consider the facilities to be a minor problem and a major problem respectively. As mentioned above it is more appropriate to relate the responses to specific ports.
2l	V22	20	Almost 1/3 (31%) see illegal potting as not presenting a problem with 2/3 (66.8%) regarding it as a problem - 97 (39%) minor and 68 (28%) major.
2m	V23	21	An extremely high proportion (88%) consider the cost of bait to be a problem facing crayfishermen. However, 141 (57%) feel it is of major concern, whereas 77 (31%) regard it as being minor. Only 26 (10%) think it presents no problem.
3a	V24	22	Close to 90% of crayfishermen consider there to be too many crayfishing boats operating in the Southern Zone.
3b	V25	23	When asked how many boats should be taken out of the crayfishermen's home port one quarter (63) said none, suggesting that 29 who think there are too many boats in the Southern Zone don't want boats removed from their home port. Nearly 1/3 (31%) would like to see 10 or fewer boats removed while 5% are prepared to accept the removal of over 30 boats.
4	V26	24	In estimating the proportion of illegal pots used, 28 fishermen (11%) thought there were none, while much the same number 24 (10%) opted for over 20%. 6% weren't sure or didn't know whereas a significant proportion (13%) were not prepared to comment.

Question No.	Variable No.	Printout Page No.	Discussion
5a	V27	25	163 (66%) reported having a full-time job prior to becoming a full-time crayfisherman.
5c	V38	26	Of the 163 fishermen who had been employed in a full-time job prior to full-time crayfishing, 25% had been employed in jobs which required a trade or professional qualification.
6a	V39	27	13% of the fishermen interviewed had begun cray-fishing on a full-time basis more than 25 years ago with the majority (61%) entering the industry in this capacity between the years 1954-68. A significant proportion (26%) have entered the industry in the last 10 years, i.e. since 1969.
6b	V40	28	184 (75%) of the fishermen have fished every season since entering the industry on a full-time crayfishing basis.
6c	V41	29	Of the 25% who had not fished every season more than half (62%) had missed only 1 or 2. 18% had missed more than 3 seasons.
6d	V42	30	Of those who had temporarily exited from crayfishing the majority (74%) had returned in the period 1969 onward.
7	V53	31	85% of the respondents intend remaining profession fishermen until they retire. 9% don't and 5% were not sure.
8	V54	32	Over 1/3 (36%) of the fishermen responding have considered leaving the full-time crayfishing life whereas 62% have not considered getting out of the industry.
9a	V55	33	50% of the fishermen have been skippers for more than 10 years.
9b	V56	34	A significant proportion (19%) had not served an "apprenticeship" as a deckie before becoming skippers. Equally as interesting is the fact that approximately 1/3 (34%) reported spending more than 5 years as a deckie with 10% more than 10 years.

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Question No.	Variable No.	Printout Page No.	Discussion
10a	V57	35	The majority of respondents (nearly 90%) own their own boats.
10b	V58	36	Of those owning their own boats over 80% stated they had always skippered their own boat.
10c	V59	37	The main "owner" of the boats not owned by the fishermen was reportedly "the company" with 59% of the total.
10d	V60	38	A very small proportion of the 247 fishermen interviewed received 1/3 or less of the catch, the majority (90%) naturally enough receiving 100%.
10e	V61	39	Of those not owning the boat they were skippering at the time of the survey 65% intended to own their own boat.
10f	V62	40	65% pf those intending to own their own boat intend doing so within the next 2 years with only 1 (6%) at some stage after that time. 5 (29%) stated they didn't know when they intend owning their own boat.
10f	V63	41	Of the 11 responding to the question regarding whether or not the raising of finance for purchasing a boat was difficult 4 (36%) stated they were experiencing difficulty with the remaining 7 (64%) not.
10h	V64	42	Nearly all the finance (91%) for buying the boat was expected to be raised through the bank.
10i	V65	43	¼ of those intending to buy their own boat consider they will purchase less than 70 pot authorities.
10j	V66	44	Well over half (58%) expect to pay up to $35,000 for the boat and authority, the remaining 5 (42%) over that figure.
11a	V67	45	In over half the cases (56%) the boat was fully paid off.

Question No.	Variable No.	Printout Page No.	Discussion
11b	V68	46	For those still paying the boat off the major source of finance was the bank with 89% of the total. 5% were dependant upon a family loan.
11c	V69	47	As for the number of years paying off the boat there is an equal distribution between the 4 categories (1 year, 2 years, 3 years and over 3 years) each with about ¼ share of the total.
11d	V70	48	Over 50% of those still paying off their boats report they will conclude their repayments within 3 years. 20 fishermen representing 21% have more than 5 years to wait before their boats are fully paid off.
11e	V71	49	Up to $15,000 is still owed on the boats in nearly 60% of cases with almost ¼ (22) owing more than $20,000.
11f	V72	50	A relatively small proportion (16%) found difficulty in obtaining finance for their boats.
12a	V73	51	While 76% of the fishermen only fished for crays in the 1978-79 season, a significant proportion combined cray-fishing with other fishing and in particular sharking. In fact 7 (3%) concentrated their entire effort on shark fishing.
12b	V74	52	Of those who fished for crays in the 1978-79 season (whether exclusively for crays or crays supplemente with other fishing) 12% fished for less than 100 days. At the other end of the spectrum 22 (10%) spent 200 days or more with over half (57%) spending between 100 and 150 days.
12c	V75	53	On an average hours per day basis 16 (7%) of those who fished during the 1978-79 season restricted their endeavour to less than six hours, 25% spent up to 6 - 7 hours, over 60% to 8 - 11 hours and a significant 14% were reportedly averaging 12 or more hours per day.
12d	V76	54	By far the most popular choice for crayfishermen is to go out and return the same day, although 3% stated they 'camp out' and a further 15% combine camping out with the daily venture.

Question No.	Variable No.	Printout Page No.	Discussion
12e	V77	55	18% of the fishermen indicated they worked on average less than 50 pots. 60% averaged up to and including 69 pots whereas 10% worked 80 or more.
12f	V78	56	The fishermen who reported having no deckies on trips occupy 1/5 of the cases with 75% having one and the remaining 5%, 2.
12g	V79	57	The majority of deckies work on the 21-25% of the catch with just over 1/3 receiving 20% or less and only 7% more than the 25% share.
13c	V92	59	Of those who stated they were involved in some form of fishing (whether shark, tuna or other) during the winter closure nearly ½ spent no more than a fortnight. However, 21 (28%) were involved in this fishing activity for more than 1 month.
13d	V93	60	Quite a large proportion (23%) of the fishermen did not spend any time working on the boat and gear during the clsoure, 43% stated they had spent up to 1 month, 58 (23%) between 1 and 2 months and 26 (10%) over 60 days (or 2 months).
15	V120	61	Intended fishing priorities for the 1979-80 season closely resemble those for the 1978-79 season (above) with 75% intending to exclusively fish for crays and 6 (over 2%) exclusively for shark.
16	V121	62	Over 50% of the fishermen were licensed at the time of interviewing to operate up to 69 pots with 47% 70 or more. The heaviest concentration of licensed pots was in the 60 - 79 category where almost 70% of the cases fell.
17a	V122	63	Whereas the actual number of licensed pots below 70 was in excess of 50% only 37% suggested this should be the ideal number to operate from the fishermen's current boat (assuming no restriction on the number). 53% as compared with 70% above felt the ideal number should lie between 60 - 79 while approximately 1/3 opted for 80 plus.

Question No.	Variable No.	Printout Page No.	Discussion
17b	V123	64	Very few of the boats that were being skippered at the time the fishermen were interviewed were less than 6 metres. 30% were in the 6 - 9 metre class, 42% between 9 and 12 metres and a healthy proportion over 12 metres (24%).
17c	V124	65	Boats with conventional hulls represented 57% of the total with planing hulls 40%.
17d	V125	66	In all but 39% of cases the hull of the boats were of of timber with marine ply the next most popular (19%) closely followed by fibreglass (15%).
18a	V126	67	Almost 1/3 of respondents when asked whether they had upgraded, downgraded or changed their boat in the past 3 years stated they had done so.
18b	V127	68	Upgrading was as expected the most common course taken with over 60% of previous boats being smaller. 20% of previous boats were of the same size as the present boat and a similar proportion reflecting downgrading.
18c	V128	69	The hulls of the previous boats were in over half the cases conventional hulls, the remainder planing hulls.
18d	V129	70	20% of the fishermen stated their intention to upgrade or change their present boat, 78% responded negatively to the question and 3 (2%) were unsure.
18e	V130	71	Of those who did plan to change just over 50% opted for a conventional hull for their new boat, 40% a planing hull and 1 person was not particularly worried. 3 fishermen did not know the type of hull their planned future boat would have.
18f	V131	72	Interestingly 20 fishermen representing 8% of the total responded positively when asked whether their boat and authority was on the market at the time the survey was being conducted.
18g	V132	73	Of the boats (and authorities) reportedly on the market nearly 40% had a price tag in excess of $35,000.

Question No.	Variable No.	Printout Page No.	Discussion
18h	V133	74	The price expected for the boat and authority was stated to be less than $21,000 in 21% of the cases, between $21,000 and $60,000 in 60% of the cases and over $60,000 in 19%.
19a	V134	75	Relatively few (11%) had bought additional pot authorities in the previous year.
19b	V135	76	Of those who had purchased extra authorities in that time just over half had bought 15 or less.
19c	V136	77	Again just in excess of 50% paid between $100 and $149 while 46% outlaid $150 or more as the highest price paid for a pot authority.
19d	V137	78	Significantly nearly 20% of those interviewed stated their willingness to pay $200 or more for an additional pot authority but the most popular range was the $100-$149 with 38%.
20a	V138	79	1978-79 saw 20% of the fishermen catch an estimated (in many cases) 200 or more bags of crayfish with a slightly higher percentage doing rather worse with less than 100 (23%). Nearing 60% took between 100 and 199 bags.
20b	V139	80	Much the same proportions were experienced in 1977-78 although the 'less than 100 bag' and the '200 and over bag' categories were marginally higher than for the following year.
21a	V140	81	It is interesting to note that 18% of the interviewees regarded less than 100 bags of crayfish to be the minimum quantity required in the forthcoming season to make it economically worthwhile to remain in the industry. Nearly ¼ considered 200 or more to be the minimum with once again close to 60% suggesting 100 to 199.
21b	V141	82	Significantly about half of the fishermen responded that they would expect to supplement the stated minimum catch with sharking or other forms of fishing.

Question No.	Variable No.	Printout Page No.	Discussion
24	V181	83	The majority of the fishermen were operating their fishing affairs on a family partnership plane (57%) followed by 'single owner' with 33% of the total.
26c	V196	84	Relevant only when considered in relation to a specific port.
28	V202	85	As far as the proportion of expenditure on major items such as furniture, electrical goods etc. excluding day-to-day expenditure is concerned, 3/4 of the fishermen spend nothing in their home port.
28	V203	86	Relevant only when considered in relation to a specific port.
28	V204	87	Relevant only when considered in relation to a specific port.
29a	V205	88	On Copes' observation that there exist too many boats in the Southern Zone crayfishing industry, 87% of the interviewees agreed.
29b	V206	89	On Copes' suggestion that up to 1/3 of the boats should be removed (bought out) just over 1/5 were not prepared to see any boats go while 22% accepted a reduction by less than 33%. 57% however were in agreeance with the Copes notion.
29c	V207	90	Some form of buy-back was deemed an appropriate means of reducing the number of boats by 72% of the respondents, while 5% were uncertain.
30a	V224	91	16% of fishermen were quite definite that they would be interested in selling their boat and authorities to a buy-back authority if they could be guaranteed a satisfactory price.
30b	V225	92	Relatively few, when asked to estimate the total price they wanted for both boat and authority, nominated $20,000 or less. Again the majority settled on the $21,000 - $60,000 range (61%) with ¼ wanting over $60,000.

Question No.	Variable No.	Printout Page No.	Discussion
31a	V226	93	Copes recommended that a proportion of the pots taken out under a buy-back scheme should be redistributed among the remaining boats. When confronted with the question requiring an estimate of the proportion 81% said none of the pots should be redistributed, a highly significant response. 8% were willing to see up to 20% redistributed while 11% gave the nod to over 20%.
31b	V227	94	Given the opportunity just over 1/3 of the fishermen indicated they would purchase more pots if pots became available through the implementation of a buy-back scheme.
31c	V228	95	Under this system, of those saying they would buy more 27% reported willingness to pay $200 or more for additional pots with relatively few nominating less than $100. 58% were prepared to pay between $100 and $199.
32a	V229	96	Half of the fishermen when asked how much they would be prepared to pay for each boat removed by a buy-back scheme from their port stated nothing at all. It is interesting to note that 6% were prepared to pay $500 or more. 67 (27%) were unable to make a judgement.
32b	V230	97	Significantly 45% were not willing to pay anything per year for 1/3 of the boats to be taken out of the Southern Zone. A further 36 (14%) stated their willingness to part with between $100 and $499 annually while a similar proportion were inclined to pay $1000 or more. 38 (15%) were apparently willing to pay something but were unsure as to the amount.
33a	V232	98	If the occasion arose whereby the boat and authority was in fact sold to a buy-back authority or to another fisherman, 25 (10%) of the fishermen indicated they would "retire". 71 (29%) stated they would revert to another fishing activity, 6% would return to a former trade and nearly 20% to farming or other business investments. A significant proportion seemed unprepared for such an eventuality having little or no idea as to what they would do.

Question No.	Variable No.	Printout Page No.	Discussion
33b	V233	99	Almost 1/3 of the fishermen revealed that they would expect some sort of government assistance to pursue alternative ventures (including retirement).
33b	V234	100	Of those who expected government assistance the majority (43%) opted for a government subsidy as the optimal means of support. 23% voted for a retraining scheme of some description with a further 3% voicing the need for both subsidy and retraining.
33c	V235	101	Approaching half of the fishermen (41%) thought they would have to move from where they were living at the time if they left the crayfishing industry. 49% were confident that they would be able to remain where they were while 24 (10%) were uncertain as to whether a move would be prompted.
33c	V236	102	Of those suggesting a move would be warranted upon leaving the crayfishing industry a significant proportion (24%) were not sure as to their destination. On the other hand 37% would be inclined to go to another port whether in the Southeast, elsewhere in South Australia or interstate. 18% were prepared to remain in the Southeast, with 5% opting for another port in the Southeast and 13% for another (non-port) Southeast town.
34a	V237	103	Relatively few fishermen interviewed were younger than 25 years and even fewer older than 59. The intervening age groups display a fairly even distribution.
34b	V238	104	Only 28 of the 247 fishermen interviewed (representing 11% of the total) were single.
34c	V239	105	30% had no dependant children although this figure is confounded by the inclusion of the "singles". Close to 50% had 1 or 2 dependant children, 14% had 3 and 9% over 3.
34d	V240	106	1/3 of the fishermen's wives had either a full-time or part-time job during the 1978-79 year, with the majority (26%) employed on a full-time basis.

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Question No.	Variable No.	Printout Page No.	Discussion
34e	V241	107	Nearly 2/3 of the wives who had been employed in 1978-79 were employed locally in a non-fishing job with 19% in the local fishing industry. 10 (14%) travelled to another port to work in a non-fishing job.
34f	V247	108	Significantly over ½ of fishermen reported their present dwelling to be fully owned with 27% in the process of purchasing it. Only 10% were living in rented accommodation at the time of being interviewed.
34g	V248	109	Of those paying rent or paying off a mortgage 60% were paying less than $100 per month. $200 or over was quoted by 14 (16%) of cases.
34h	V249	110	Over ½ the fishermen interviewed had been born in the Southeast with 18% locally. A significant proportion had been born in Adelaide (14%) with more or less an equal distribution being born elsewhere in S.A., interstate or overseas.
34i	V250	111	Relatively few fishermen had lived in their local port for 5 years or less with well over 50% having resided there for over 20 years.
34j	V251	112	The fishermen interviewed are a relatively intransient group supported by 176 (71%) having resided in only the one place over the past 10 or so years. 18% had lived in one other place while only 6% had lived in 2 or more.
34k	V252	113	Significantly ½ of the fishermen had left school before the age of 15 with only 10% remaining until they were at least seventeen.
34l	V253	114	20% of the fishermen when asked if they had any trade or professional qualification replied that they did so.
34m	V259	115	Interestingly approaching ½ had a father fishing on a full-time basis.

Question No.	Variable No.	Printout Page No.	Discussion
34n	V260	116	Approximately 60% reported having at least one brother working as a full-time fisherman.
34n	V261	117	Nearly 30% had a son fishing full-time.
34n	V262	118	Just over 1/3 had a brother-in-law working full-time as a fisherman.
34o	V263	119	When asked whether or not they had a son who was expected to take over the boat at some time in the future, 55% of fishermen responded with 'yes', while 20% who had sons didn't think their sons would follow in their footsteps. A further 24% were not sure as to what their sons intended doing in this respect.
			The following Tables differ in format to those preceding them to the extent that each table combines a number of variables into one table instead of an analysis of responses to the one variable. Although the responses to each variable have in the main been analysed before, it is nevertheless worthwhile comparing similar responses between variables (in the "PCT OF RESPONSES" column). Where they have been analysed before we will disregard the "PCT OF CASES" column.
2	V11/V23	121	Table 1: This Table combines all variables (V11 to V23) where fishermen stated 'no problem' to the question (Q.2) regarding which factors they considered to be a problem (major, minor or no problem) in their own port. 167 fishermen stated 'no problem' to recruiting deckies, representing 15% of all 'no problem' responses to the various factors. Compared with the 26 (2% of all responses) who suggested bait cost as 'no problem' we are able to say that the fishermen view recruiting deckies as being relatively less of a problem than the cost of bait (as are indeed all of the other factors). The "PCT OF CASES" column merely reflects the percentage of fishermen opting for 'no problem' for each variable and can be compared with the corresponding response in Tables 2 and 3, i.e. as discussed above (P.9 in printout) 77 (32%) of fishermen regard processors price as being no problem, while 35% (Table 2) see it as being minor and 35% (Table 3) major.
2	V11/V23	122	Table 2: Of those fishermen nominating 'minor problem' relatively more fishermen (104 or 12%

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Question No.	Variable No.	Printout Page No.	Discussion
			of the total) regarded 'pot lifting' as a minor problem than any other factor with 'getting extra pots' as the least stated.
2	V11/V23	123	Table 3: Fuel costs (172), the cost of gear (170) and too many boats (167) were the three most commonly reported factors being major problems in the fishermen's own ports. The factors least regarded as major problems were recruiting deckies (30) and pot lifting (37).
5b	V28/V32	124	Table 4: Of the full-time jobs the fishermen reported they had been employed in before becoming full-time crayfishermen, almost ¼ were farm jobs, a further 32% labouring jobs and 20% could be classed as semi-skilled/skilled.
5b	V33/V37	125	Table 5: Of the 60 locally held jobs prior to becoming crayfishermen 2/3 were either farmwork or labouring with 5% (3) clerical/sales. The analysis of responses in this Table would be made more relevant by considering specific ports.
5b	V33/V37	126	Table 6: Of the 90 jobs which were reportedly held in the South East (not local) over 1/3 were labouring jobs and only 18% farmwork. Nearly ¼ was semi-skilled/skilled work with an interesting 12% being clerical/sales.
5b	V33/V37	127	Table 7: The fishermen were employed in 60 other jobs in areas other than in the local port or elsewhere in the South East. The majority of these jobs were held interstate (45%) followed by Adelaide (25%) with the proportions of country work and work overseas being much the same.
6e	V43/V47	128	Table 8: Crayfishermen who had temporarily left the crayfishing industry collectively reported having been employed in 64 jobs during their absence. Nearly 1/3 of these jobs involved labouring work.
6e	V48/V52	129	Table 9: Of 25 locally held 'interim' jobs 24% were labouring.
	V48/V52	130	Table 10: Whereas only ¼ of the locally held jobs were of a labouring nature (in Table 9), Table 10 indicates that the 50% of interim jobs held in the South East were labouring jobs, with 18% farmwork.
6e	V48/V52	131	Table 11: 23 'interim' jobs were held in other locations, 65% of which were interstate.
13b	V81/V86	132	Table 12: Of the activities that weren't pursued during the recent closure maintaining the boat and gear was least represented with only 2.5% of the total, where in 60 cases no work was carried out. Little variation is obvious between the other activities ranging from 207 (9%) not sharking to 246 not doing council work during the closure.

Question No.	Variable No.	Printout Page No.	Discussion
13b	V81/V91	134	Table 13: Where work had been reportedly carried out locally on the various activities during the previous closure 181 (56% of responses) maintained their boat and gear whereas shark-fishing rated 11%. Interestingly, tuna fishing was the second most popular closure activity reported commanding 12% of total responses.
13b	V81/V91	135	Table 14: Of activities conducted during the closed season elsewhere (i.e. non-local) maintaining boat and gear was reported in nearly ¼ of the cases, followed by sharking (19%) then tuna and other fishing (12%).
14b	V96/V107	136	Table 15: The most commonly suggested months for the crayfishing closure to be in force for male crays were May to August with each of these months capturing over 150 responses by the fishermen. July was the most popularly stated month of the four with 19% followed by June (19%), May (16%), then August (15%). At each end of this 4 month period 59 fishermen indicated April with 106 and 104 stating September and October respectively.
14b	V98/V107	137	Table 16: Open season for males - converse of Table 15.
14b	V108/V118	138	Table 17: For the female crayfish closure, time period similar to that for males in Table 15 was opted for, viz.- May through August. In fact the two tables are almost identical.
14b	V108/V119	139	Table 18: Open season for females - converse of Table 17.
22a	V142/V147	140	Table 19: Of the processors fishermen sold to in the 1978-79 season, SAFCOL was indicated in 124 of the cases representing 45% of the total. The next major processor indicated was Fishbrook with an 18% share followed by Raptis (14%).
22b	V148/V154	141	Table 20: When asked which processors the fishermen would sell to in the 1979-80 season, the advent of the Unit Trust caused all prospective shares of the total catch except the Carpenter Rocks Company to be reduced. The proposed share of the Unit Trust was an interesting 21% with the major processor SAFCOL having its share of the total reduced by 6% from 45% in 1978-79 to an expected 39%. The variables comprising the following two Tables are presented individually in the final 26 Tables of the printout.
23	V155/V166	143	Table 21: Analyses the "strongly disagree" responses to 26 statements on issues of interest to crayfishermen. The statement which encouraged the greatest "strongly disagree response was that

Question No.	Variable No.	Printout Page No.	Discussion
			"the taking of berried females has little effect on future cray yields". The statement that "pot authorities should be non-transferable" was strongly disagreed to by 156 of the 247 fishermen while the least "strongly disagreed" with statement was that "in crayfishing, limited entry is necessary to manage the resource".
23	V155/V180	144	Table 22: 187 fishermen "strongly agreed" that "fines for taking undersized crays should be substantially increased" which with a 13% share of the total responses is the major source of strong agreement among the statements. "There should be more policing of undersized crays" was the next most "strongly agreed" to statement.
25	V182/V187	145	Table 23: Of various investments in the South East reported by crayfishermen the majority were non-fishing property investments (26%). Just over 1/5 of the investments were in fishing business or property with a further 1/5 in farming.
26a	V188/V191	146	Table 24: 198 of the 247 fishermen interviewed had stated they were members of the Professional Fishermen's Association, 126 were members of SAFCOL and 73 (or 1/3 of fishermen) were members of the Unit Trust.
26b	V192/V195	147	Table 25: Of a number of services used by the fishermen an accountant or tax agent was most commonly used with 95% using this service (representing 40% of the services used). This was followed by an insurance agent - 74% using (31% share of total). Less than half of the fishermen interviewed had used the Department of Fisheries.
27	V197/V201	148	Table 26: Membership of a sporting group was the most popularly reported group tie (66%), compared with 13% religious group membership and 11% service organisation.
29d	V208/V213	149	Table 27: When asked how a buy-back authority should be administered no one administering body was clearly voted for by the fishermen. Only one fishermen indicated that a buy-back should be run along the lines of Copes' suggestion
29e	V214/V223	150	Table 28: Other forms suggested for reducing effort other than buy-back were divided among winter closure (nominated in 20% of the responses), develop other fisheries (18%), reduce the number of pots per boat (16%) and 'OTHER' (21%). In 16% of the responses given buy-back was deemed the only option.
34e	V242/V246	151	Table 29: Of 70 jobs the fishermen's wives had been employed in nearly half were in the sales/domestic work category with 17% clerical and 27% other. 10% were reportedly of a skilled nature.

Question No.	Variable No.	Printout Page No.	Discussion
341	V255/V257	152	Table 30: When asked whether the fishermen had any professional or trade qualifications 48 responses were given in the affirmative. Of these 58% were skilled trade qualifications with 35% semi-skilled.
			The following Tables (31 & 32) combine the responses to variables 155 to 180 into the one Table. Table 31 refers to 'disagree responses' (combining 'disagree' and 'strongly disagree' responses) for these variables while Table 32 analyses 'agree responses' ('agree' and 'strongly agree').
23	V155/V180	154	Table 31: The statement most frequently disagreed with was that "the taking of berried females has little effect on future cray yields" closely followed by "fees per pot should be increased so c to cut out inefficient fishermen". The least often disagreed with statement was that "fines for taking undersized crays should be substantially increased" (only 0.5%).
23	V155/V180	155	Table 32: The most frequently agreed upon statement (230 responses - 8%) was as expected from looking at Table 31, that "fines for taking undersized crays should be substantially increased". In fact Table 32 is merely the converse of Table 31.
			The following 26 frequency Tables examine in detail the whole range of responses from 'strongly disagree' to 'strongly agree' with 26 statements made in the questionnaire concerning various aspects of the crayfish industry.
23a	V155	158	Of the 247 fishermen interviewed nearly half strongly agreed that the number of crayfishing licences should be pegged as they are. A further 25% agreed such that this statement was agreed upon by over 70%.
23b	V156	159	Fishermen were virtually divided on the statement that pot allocation should not be related to vessel size with just over ½ disagreeing. 10 (4%) neither agreed nor disagreed.
23c	V157	160	Again there was a division on the statement that the top boats should be encouraged to move into another fishery with 46% disagreeing and 42% agreeing.
23d	V158	161	When put to the fishermen that survey requirements were too strict almost 70% disagreed with nearly ¼ disagreeing strongly.
23e	V159	162	The suggestion that fees per pot should be increased to cut out inefficient fishermen was met with strong disagreement by 48% with a further 39% disagreeing, thereby totalling 87% in all who were against it.
23f	V160	163	Again the majority (73%) disagreed with the statement related to designated fishing zones for ports. Only 55 (22%) agreed with the statement.

Question No.	Variable No.	Printout Page No.	Discussion
23g	V161	164	½ of the fishermen disagreed strongly that there should be a pot reduction of 10 per boat. In all 74% disagreed.
23h	V162	165	A greater proportion (56%) agreed that the government should not interfere in the economic management of the cray fishing industry, while 12% neither agreed nor disagreed.
23i	V163	166	Relatively fewer fishermen agreed that crayfishermen from other ports should not be permitted to move to "this port" to fish than disagreed. 22% strongly disagreed with the statement.
23j	V164	167	Nearly all (90%) of the fishermen agreed that limited entry was necessary to manage the resource with a significant proportion (over 50%) strongly agreeing.
23k	V165	168	Nearly 70% agreed they were satisfied with present radio communications. However, 17% strongly disagreed.
23l	V166	169	Interestingly, nearly 40% of the fishermen agreed that the price they received from processors for their crays was satisfactory. However, ¼ strongly disagreed.
23m	V167	170	As expected from responses to previous questions over 80% agreed there were too many cray boats in the Southern Zone, with a significant proportion (53%) agreeing strongly.
23n	V168	171	Over 90% agreed that fines for taking undersized crays should be substantially increased with 76% quite adamant about it.
23o	V169	172	Government intervention was seen as being necessary in 65% of the cases but only 12% agreed strongly.
23p	V170	173	A deckie's pot allowance should not be based on seniority was the response in 77% (87 fishermen) of the cases with a greater proportion merely disagreeing than strongly disagreeing.
23q	V171	174	It came as no surprise that well over 80% of fishermen disagreed with the notion that pot authorities should be non-transferable with the greater proportion strongly against it. Of interest nevertheless, was the 8% who strongly agreed with non-transferability.
23r	V172	175	A greater proportion (55%) of fishermen agreed that port charges should meet the costs of providing port services. However, 21% strongly disagreed compared with 18% strongly agreeing.
23s	V173	176	Sharking should not be made a limited entry fishery according to almost 60% of cray fishermen. Nevertheless 22% agreed and 13% were strong in their agreement that it should be.

Question No.	Variable No.	Printout Page No.	Discussion
23t	V174	177	Consistent with the response regarding increasing fines for taking undersized crayfish was the agreement with the suggestion that there should be more policing in this area. 86% agreed (63% strongly). Less than 10% disagreed with more policing.
23u	V175	178	The greater majority (74%) of the fishermen agreed that their dealings with the Department of Marine and Harbours had been satisfactory although only 15% strongly agreed. 22 fishermen (9%) strongly disagreed.
23v	V176	179	The fishermen were more or less divided on the statement regarding amateurs having little effect on yields with a somewhat greater proportion disagreeing. It is interesting to note the proportion strongly disagreeing (27%).
23w	V177	180	As previously noted, the taking of berried females <u>does</u> have an effect on future cray yields according to approaching 90% of the fishermen with 74% strongly against the statement of little effect. 9 fishermen representing 4% of the total strongly agreed with the statement however.
23x	V178	181	68% agreed they should be allowed to fish for carp for bait. An interesting 22% thought they should not however.
23y	V179	182	A much greater proportion agreed than disagreed that their dealings with the Department of Fisheries had been satisfactory. Over 12% strongly disagreed however, with 23% disagreeing in all.
23z	V180	183	A buy-back authority would <u>not</u> be more effective if pot authorities were non-transferable according to 57% of fishermen; 36% strongly disagreed to the statement that it would be more effective with that condition.

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CENTRE FOR APPLIED SOCIAL & SURVEY RESEARCH (CASSR)
THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

V1 V2 V3

1 = Skipper/owner
2 = Skipper
3 = Deckie
4 = Owner

1979 SOCIO-ECONOMIC SURVEY OF THE ROCK LOBSTER INDUSTRY IN SOUTH AUSTRALIA, SOUTHERN ZONE

Port: ____________________ V4

Town of Residence: ____________________ V5

Interviewer: ____________________ V6

Date: / / 1979

Duration of Interview: mins. V7

INTERVIEWER TO READ THIS STATEMENT

Thank you for agreeing to be interviewed.

You may know that in early 1978 the Department of Agriculture & Fisheries in South Australia published the Copes Report which made a number of recommendations on how the economic condition of the industry might be improved. One of the things that Copes recommended was the establishment of a vessel buy-back authority.

As you no doubt know, fishermen in the Southern Zone asked the Australian Fishing Industry Council (SA Branch) for help in having a major study done on the socio-economic effects of effort reduction proposals such as a buy-back scheme. Earlier this year the Centre for Applied Social & Survey Research at Flinders University was asked to do a survey of the industry and to report back to AFIC and the fishermen.

In preparing our report it is important that we know how deckies feel about some of the issues. The questions mainly ask you to give your opinions on a wide range of issues affecting the industry. Regardless of whether you agree or disagree with the Copes Report, it is important we get your opinions and that of every other fisherman.

We wish to give you complete assurance that the answers you give us will be treated in the strictest confidence. Nobody outside the Research Centre will see the questionnaire, and no individual will be able to be identified in any report we write.

	OFFICE USE ONLY	
Q.1 How long do you intend staying in the industry?		
Temporary - a year or two	1	
Temporary - two to five years	2	
Longer term - five to ten years	3	V9
Permanent career	4	
Do not know	0	
Q.2a. In what year did you take up crayfishing as a deckie?		
Year:	19 ⌊_⌊_⌋	V10
b. Have you crayfished every season since then?		
Go to Q. 3 ← Yes	1	V11
No	2	
c. How many seasons did you miss?		
No. of seasons	⌊_⌊_⌋	V12
	Code no. of seasons	
d. In what year did you last come back?		
Year:	19 ⌊_⌊_⌋	V13
e. List the jobs you had during the time(s) you left the industry, & where were these jobs held?		
None at all	0	
Jobs / Location		
____________ / ____________	1 = 1	
____________ / ____________	2 = 2	
____________ / ____________	3 = 3	
____________ / ____________	4 = 4+	V14

OFFICE USE ONLY

Q.3a. Before becoming a deckie (for the first time) did you have any other full-time job?

Yes 1

Go to Q.4 ← No .... 2 — V15

b. List the jobs held, and indicate where they were located.

Jobs	Location
______	______
______	______
______	______
______	______

0 = None, not applicable
1 = 1
2 = 2
3 = 3 — V16
4 = 4+

c. Did any of these jobs require you to have a trade or professional qualification?

Yes 1
No 2
Do not know .... 3 — V17
Not applicable 0

Q.4a. For how many years have you worked as a deckie?

No. of years .... [|] — V18

b. How many cray boats have you worked on as a deckie?

No. .... [|] — V19

c. How many different ports have you worked in?

No. of ports .... [|] — V20

Q.5a. Do you hold a Certificate of Proficiency (skipper's ticket)?

Yes .... 1 — V21

Go to Q.5e. ← No 2

b. How many years have you had it?

No. of years .... [|] yrs. — V22

c. Have you ever skippered a boat?

Yes .... 1 — V23

Go to Q.5e. ← No 2

d. In total how long have you skippered a boat?

No. of years .... [|] yrs. — V24

e. Are you doing anything about obtaining a Certificate of Proficiency (skipper's ticket)?

Yes 1

Go to Q.6 ← No .... 2 — V25

Do not know 3

f. When do you expect to get it?

This year 1
Within two years 2
Over two years .... 3 — V26
Do not know 4

OFFICE USE ONLY

Q.6a. Do you intend owning your own boat?	Yes	1	
Go to Q.7 ←	No	2	V27
	Do not know	3	
b. When do you intend owning your own boat?	Trying now	1	
	Within two years	2	V28
Go to Q.6d. ←	Over two years	3	
	Do not know	4	
c. Are you experiencing difficulty in raising finance?	Yes	1	V29
	No	2	
d. Where will you obtain the finance?	Self finance	1	
	Family	2	
	Bank	3	
	Hire purchase Co.	4	V30
	Processor	5	
	Other	6	
	Do not know	0	
e. How many pot authorities do you intend purchasing?	No. of pots	⎣ ⎣ ⎦ Code no.	V31
f. How much do you intend to pay for the boat & authority?	Amount $	⎣ ⎣ ⎣ ⎣ ⎣ ⎣ ⎦	V32
	Do not know	0	

Q.7a. Did you go fishing during the 1978/79 financial year?	Yes	1	V33
Go to Q.7d. ←	No	2	
b. Roughly how many days did you go fishing during the past financial year?	No. of days	⎣ ⎣ ⎣ ⎦ Code days	V34
c. Did you -		Code 1 = only 2 = some of the time 0 = no	
	fish for crays	1 2 0	V35
	for other fish	1 2 0	V36
d. During the current season are you -	fishing for crays	1 2 0	V37
	for other fish	1 2 0	V38
e. If you went crayfishing last season, what percentage of the catch did you receive?	Percentage of catch	⎣ ⎣ ⎦ Code %	V39
f. Roughly what proportion of your earnings went to costs such as bait costs?	Percentage	⎣ ⎣ ⎦ Code %	V40
	No costs	0	

OFFICE USE ONLY

Q.8 What did you do during the recent closure?

(Interviewer: Probe to see if went on dole & if so, whether for whole or part of time)

Code 1 = yes
0 = no

Maintenance of boat & gear	1	0	V41
Fished for tuna	1	0	V42
Fished for shark	1	0	V43
Other fishing	1	0	V44
Council work	1	0	V45

Code 1 = In Southeast
2 = Away
0 = no

Fox shooting	1	2	0	V47
Farm work	1	2	0	V48
Building/labouring	1	2	0	V49
Factory work	1	2	0	V50
Other work (specify ______)	1	2	0	V51

Code 1 = whole time
2 = part of time
0 = no

Unemployment Assistance	1	2	0	V52

Q.9 Has the recent extended closure had any effect on what you normally do during that time of the year?

(Specify: ______)

Yes	1	
No	2	V53
Not applicable	0	

Q.10a. Are you a member of any of the following?

Code 1 = yes
0 = no

Professional Fishermen's Assn.	1	0	V54
SAFCOL	1	0	V55
Unit Trust	1	0	V56
Any other (state) ______	1	0	V57

b. Do you find it necessary to make use of any of the following?

Code 1 = yes
0 = no

Accountant/Tax Agent	1	0	V58
Insurance Agent	1	0	V59
Lawyer	1	0	V60
Department of Fisheries	1	0	V61

c. In which town do you bank? (State: ______) .... |__|__| V62

Code later

Q.11 What social, sporting, business or service organization do you belong to?

Code 1 = yes
0 = no

Service	1	0	V63
Sporting	1	0	V64
Cultural	1	0	V65
Religious	1	0	V66
Other	1	0	V67

OFFICE USE ONLY

Q.12 Excluding day-to-day expenditure on food, drink, petrol etc., what proportion of your household expenditure on other major items, such as furniture, good clothing, electrical goods etc. would you spend in your home port, Mt. Gambier, Millicent or elsewhere?

	0%	0-20%	20-40%	40-60%	60-80%	80-100%	100%
Home port	1	2	3	4	5	6	7
Mt. Gambier Millicent	1	2	3	4	5	6	7
Elsewhere	1	2	3	4	5	6	7

Code no. in box — V68, V69, V70

Q.13 It is important that we obtain some idea of how much income you have earned in the past two years.

a. About how much did you gross in the 1978/79 financial year? $ ....

Code amount — V71

b. How much of this was from other sources?

% Code in percentage of above — V72

c. About how much did you gross in the 1977/78 financial year? $ ....

Code amount — V73

d. How much of this was from other sources?

% Code in percentage of above — V74

OFFICE USE ONLY

Q.14 The following issues are said to be of interest to deckies. Please indicate whether you agree or disagree with each statement.

(Interviewer: hand card 2 to respondent and ask him to reply 1, 2, 3, 4, 5 to each statement - explain what the numbers on the card mean)

a. As deckies work for a percentage of the catch, they have the right to worker's compensation	1 2 3 4 5 0	V75
b. Deckies should have pots made available to them according to their experience in the industry	1 2 3 4 5 0	V76
c. If a buy-back scheme was introduced and the boat I work on was bought out, I would find it difficult to remain in crayfishing	1 2 3 4 5 0	V77
d. If a buy-back was introduced and the boat I work on was bought out, I would find it easy to move into another fishery	1 2 3 4 5 0	V78
e. If a buy-back scheme was introduced the government should provide a retraining scheme for deckies who lose their job so that they can move into an industry outside fishing	1 2 3 4 5 0	V79
f. I would be prepared to move out of fishing completely if I could get a job that paid me a guaranteed gross annual income of $8,000	1 2 3 4 5 0	V80

Q.15a. Have you read the Copes Report?

Yes 1
No .... 2 — V81
Go to Q.16 ← Not heard of it 3

b. Have you discussed the report with your skipper?

Yes 1
No .... 2 — V82

c. What do you think of the report?

For it 1
Some good, some bad 2
Totally against it .... 3 — V83
No opinion 4
Not applicable 0

d. What would you do if the boat you are working on was sold to a buy-back authority next year?

Code:
1 = Find another cray boat in S.E.
2 = Some other form of fishing in S.E.
3 = Some job in present port/town
4 = Move out
5 = Do not know

Specify: ______________________ V84

e. How do you think a buy-back as proposed by Copes would affect your chances of owning your own cray boat?

(Interviewer: do not prompt)

Do not know 0
Make it impossible 1
Make it economically more difficult .... 2 — V85
Make it technically more difficult 3
Make it technically & economically difficult 4
Economically easier 5
Technically easier 6
Other: (specify) ______________________ 7

→ Q.15f. ..../7

OFFICE USE ONLY

Q.15f. What other effects do you think the carrying out of the Copes Report would have for you?

______________________________ V86

______________________________ V87

______________________________ V88

Do not know 0 V89

Q.16 Finally a few questions about yourself and your family.

a. What is your age?

Code age in years V90

b. Marital status.

Go to Q.16g. ← Single	....	1	
Married	....	2	V91
Separated/Divorced	....	3	
Widowed	....	4	

c. How many dependant children do you have?

Code number V92

d. In financial year 1978/79 did your wife have a

Part-time job	....	1	
Full-time job	....	2	V93
Go to Q.16g. ← No job	....	3	

e. What did she do, and where was the job located?

Job	Location

(Code details later)

Code:
1 = local concerned with fishing
2 = local not concerned with fishing
3 = outside port, concerned with fishing
4 = outside port not concerned with fishing
0 = no job V94

f. Approximately what was her gross income for the financial year 1978/79? $ ....

Code in $s V95

g. Is your present dwelling

Rented by you	....	1	
Boarder in private home	....	2	
Being purchased by you	....	3	V96
Fully owned by you	....	4	
Go to Q.16i. ← Your parents home	....	5	
Other	....	6	

h. What is the monthly rent or mortgage payment? $ ....

Code $s V97

Do not know 0

OFFICE USE ONLY

Q.16i. Where were you born?

____

Code:
1 = Local port
2 = Other S.E.
3 = Adelaide
4 = Other S.A.
5 = Interstate
6 = Overseas
V98

j. How many years have you lived in the port/town you currently live in?

No. of years .... [|] Code no. of years V99

Do not know 0

k. How many places/towns have you lived in since 1970?

[|] Code no. of towns V100

l. What age were you when you left school?

Age in years .... [|] V101

Do not know 0

m. Do you have any professional or trade qualifications?

Yes 1

No 2 V102

Do not know 0

Specify: ______________________________

n. If you were to go out of the crayfishing industry and there was no possibility of working in another fishery, would you want re-training in another profession, at no expense to yourself?

Yes 1

No 2 V103

Do not know 3

o. What type of training would you want?

____

____

____

____

(Code later)

p. Is there any members of your family or immediate relation currently working as a full-time fisherman, or has any member done so?

Yes 1

No 2 V104

Do not know 0

OFFICE USE ONLY

Code: 1 = Yes, 0 = No

Q.16q. If so which of the following?

Father ...	1	0	
Brother(s)...	1	0	
Son ...	1	0	V105
Brother in law ...	1	0	

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CENTRE FOR APPLIED SOCIAL & SURVEY RESEARCH (CASSR)
THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

V1			V2	V3

1 = Skipper/owner
2 = Skipper
3 = Deckie
4 = Owner

1979 SOCIO-ECONOMIC SURVEY OF THE ROCK LOBSTER INDUSTRY IN SOUTH AUSTRALIA, SOUTHERN ZONE

Port Operating out of: ______________________ [ ] V4

Town of Residence: ______________________ [ ][ ] V5

Interviewer: ______________________ [ ][ ] V6

Date: / / 1979

Duration of Interview: ______________ mins. [ ][ ] V7

INTERVIEWER TO READ THIS STATEMENT

Thank you for agreeing to be interviewed.

You may know that in early 1978 the Department of Agriculture & Fisheries in South Australia published the Copes Report which made a number of recommendations on how the economic condition of the industry might be improved. One of the things that Copes recommended was the establishement of a vessel buy-back authority.

As you no doubt know, fishermen in the Southern Zone asked the Australian Fishing Industry Council (SA Branch) for help in having a major study done on the socio-economic effects of effort reduction proposals such as a buy-back scheme. Earlier this year the Centre for Applied Social & Survey Research at Flinders University was asked to do a survey of the industry and to report back to AFIC and the fishermen.

Your answers to these questions will be of great help to us in preparing our report. The questions mainly ask you to give your opinions on a wide range of issues affecting the industry. Regardless of whether you agree or disagree with the Copes Report, it is important we get your opinions and that of every other fisherman.

We wish to give you complete assurance that the answers you give us will be treated in the strictest confidence. Nobody outside the Research Centre will see the questionnaire, and no individual will be able to be identified in any report we write.

OFFICE USE ONLY

Q.1a. Have you read the Copes Report?

Yes ...	1		
No ...	2	Go to Q.2	
Not heard of it ...	3	Go to Q.2	V8

b. Have you discussed it with other fishermen?

Yes ...	1	
No ...	2	V9
Not applicable ...	0	

c. What do you think about the Report?

For it ...	1	
Some good, some bad ...	2	
Against it totally ...	3	V10
No opinion ...	4	
Not applicable ...	0	

Q.2 Here is a list of problems it is said are experienced by crayfishermen. Indicate whether you think each of them is a problem in <u>your port</u>, and if it is, whether it is a major or a minor problem?

(Interviewer: hand card 1 to respondent and ask him to reply 1, 2 or 3 to each statement)

a. Price received from processor	1	2	3	0	V11
b. Amateur fishermen	1	2	3	0	V12
c. Gear costs	1	2	3	0	V13
d. Obtaining extra pots	1	2	3	0	V14
e. Winter closure	1	2	3	0	V15
f. Recruiting deckies	1	2	3	0	V16
g. Too many boats	1	2	3	0	V17
h. Taking undersized crays	1	2	3	0	V18
i. Fuel costs	1	2	3	0	V19
j. Pot lifting by other fishermen	1	2	3	0	V20
k. Port facilities	1	2	3	0	V21
l. Potting over the legal limit	1	2	3	0	V22
m. Bait costs	1	2	3	0	V23

OFFICE USE ONLY

Q.3a. It is a belief that there are too many boats crayfishing in the Southern Zone. Do you agree or disagree?

Yes 1
Go to Q.4 ← No .... 2 — V24
No comment 0

b. How many boats would you like to see taken out of *(insert port)* ______________?

[__|__] V25 Code no. of boats

Q.4 For every 100 legal pots, how many illegal "blue pots" are there?
(Interviewer: obtain answer as a percentage above 100)

[__|__] Code % — V26
No comment 0

I WANT TO CHANGE THE SUBJECT NOW AND DISCUSS YOUR EXPERIENCE IN CRAYFISHING.

Q.5a. Before becoming a full-time crayfisherman (for the first time) did you have any other full-time job?

Yes 1
Go to Q.6 ← No .... 2 — V27

b. List the jobs held, and indicate where they were:

Jobs	Location

0 = None, not applicable
1 = 1
2 = 2
3 = 3
4 = 4
5 = 5+ — V28
Details to be coded later

c. Did any of these jobs require you to have a trade or professional qualification?

Yes 1
No .... 2 — V29
Do not know 3
Not applicable 0

Q.6a. In what year did you take up crayfishing full-time as either a skipper or deckie?

Year:19 .... [__|__] V30

b. Have you crayfished every season since then? Go to Q.7 ← Yes 1
No .... 2 — V31

c. If not, how many seasons did you miss?

No. of times [__|__] V32 Code no. of times

d. In what year did you last come back?

Year:19 .... [__|__] V33

→ Q 6e....../3

OFFICE USE ONLY

Q.6e. List the jobs you have had during the time(s) you have left the industry, and indicate where these jobs were held:

Jobs	Location
______________	______________
______________	______________
______________	______________
______________	______________
______________	______________

0 = None, not applicable
1 = 1
2 = 2
3 = 3
4 = 4
5 = 5+
Details to be coded later

V34

Q.7 Do you intend to be a crayfisherman until you retire?

Yes	1	
No	2	V35
Do not know	0	

Q.8 Have you ever given any thought to getting out of the industry as a full-time crayfisherman?

Yes	1	
No	2	V36
Do not know	0	

Q.9a. For how many years have you been skipper of a cray boat?

No. of years .... |__|__| V37

b. Did you spend any time as a deckie?

No. of years .... |__|__| V38

Q.10a. Do you own the boat you currently skipper?

Go to Q.10b. ← Yes	1	
Go to Q.10c. ← No	2	V39

b. Have you always skippered your own boat?

Go to Q.11 ← Yes	1	
No	2	V40

c. If you don't own your own boat, who does?

Family	1	
Other fisherman	2	
Processor	3	V41
The Company	4	
Farmer	5	
Other specify: ______________	6	

d. What percentage of the catch do you receive? .... |__|__| Code % V42

e. Do you intend owning your own boat?

Yes	1	
Go to Q.12 ← No	2	V43
Do not know	3	

f. When do you intend buying your own boat?

Trying now	1	
Within two years	2	V44
Go to Q.10h. ← Over two years ...	3	
Don't know	4	

→ Q.10g. ...../4

OFFICE USE ONLY

Q.10g. Are you experiencing difficulty in raising finance?

Yes	1	
No	2	V45

h. Where will you obtain the finance?

Self financed	1	
Family	2	
Bank	3	V46
Hire purchase company	4	
Processor	5	
Other	6	
Do not know	0	

i. How many pot authorities do you intend purchasing? .... [|] Code no. V47

j. How much do you intend to pay for the boat and authority? .... [| | | | |] V48

Do not know .... 0 Code $

→ Go to Q.12

Q.11 *(This question is only for those who own their own boat)*

a. Have you fully paid off your boat?

Go to Q.11f. ← Yes	1	
No	2	V49

b. What is the source of finance for your boat?

Family loan	1	
Bank	2	
Fire purchase company	3	V50
Processor	4	
Other	5	

c. How many years have you been paying off the boat? No. of years .... [|] V51

d. How many years do you expect to be paying off your boat? No. of years .... [|] V52

Do not know 0

e. How much do you owe on your boat? Amount .... [| | | | |] Code $ V53

Do not know 0

f. Did you experience difficulty in obtaining finance?

Yes	1	
No	2	V54

Q.12a. During the 1978-79 cray season what did you fish for?
(Interviewer: do not read these, but code answer in one of these categories)

Fished for crays only	1	
Fished for crays and fish other than shark	2	
Fished for both crays and shark	3	
Fished for crays, shark and other fish	4	V55
Fished only for shark	5	
Fished for shark and other fish	6	
Did not fish at all	7	

Go to Q.13 ← (codes 5–7)

b. Number of days fished .... [| |] Code no. V56

c. Number of hours fished per day (average) .... [|] Code no. V57

d. When fishing, do you usually:

Camp out ...	1	
Go out & back in same day ...	2	V58
Combination of these ...	3	

→ Q.12e. ..../5

OFFICE USE ONLY

Q.12e. How many pots per trip do you work on average?	No. of pots	[ ][ ][ ]	Code no.	V59
f. How many deckies do you usually have on trips?	No. of deckies	[ ]	Code no.	V60
g. What percentage of the catch does your deckie work on?	....	[ ][ ]	Code %	V61

Q.13a. Did you do anything during the recent closure?

Yes		1	V62
No	Go to Q.14	2	

b. What did you do? *(Interviewer: probe for both fishing & non-fishing activities and find out where this was located. Code a number for each fishing & non-fishing activity.)*

Code 1 = yes local; 2 = yes elsewhere; 0 = no

Fishing	Maintain boat/gear	1 2 0	V63a	V63
	Sharking	1 2 0	V63b	
	Tuna	1 2 0	V63c	
	Other	1 2 0	V63d	
Non-fishing	Fox shooting	1 2 0	V64a	V64
	Farm work	1 2 0	V64b	
	Council work	1 2 0	V64c	
	Labouring/building	1 2 0	V64d	
	Tree planting	1 2 0	V64e	
	Factory work	1 2 0	V64f	
	Other: ____________	1 2 0	V64g	

c. If you went fishing for shark, tuna, etc., how many days do you go out?	No. of days	[ ][ ][ ]	Code no. of days	V65
d. Number of days spent working on boat and gear	....	[ ][ ][ ]	Code no. of days	V66

Q.14a. Do you think closure of crayfishing is of any use?
(Interviewer: ask why? and code reason for yes & no answers)

Yes	Economic	1	V67
	Biologic	2	
	Both	3	
No	Economic	1	
	Biologic	2	
	Both	3	

b. Which months do you think the crayfishing closure should be in force for males

Code 1 = closed; 0 = open

Jan. ...	1 0	V68
Feb. ...	1 0	V69
Mar. ...	1 0	V70
Apr. ...	1 0	V71
May	1 0	V72
June ...	1 0	V73
July ...	1 0	V74
Aug. ...	1 0	V75
Sept. ..	1 0	V76
Oct. ...	1 0	V77
Nov. ...	1 0	V78
Dec. ...	1 0	V79

→ for females ....../6

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b. (cont.) Which months do you think the crayfishing closure should be in force for females?

Code 1 = closed
0 = open

Jan. ...	1	0	V80
Feb. ...	1	0	V81
Mar. ...	1	0	V82
Apr. ...	1	0	V83
May	1	0	V84
June ...	1	0	V85
July ...	1	0	V86
Aug. ...	1	0	V87
Sept. ..	1	0	V88
Oct. ...	1	0	V89
Nov. ...	1	0	V90
Dec. ...	1	0	V91

Q.15 In the 1979-80 cray season that has just begun, what do you intend doing?
(Interviewer: do not read, but code answer in one of these categories)

Fish for crays only	1	
Fish for both crays & shark	2	
Fish only for shark	3	V92
Fish only for crays & fish other than shark	4	
Fish for crays, shark & other fish	5	
Fish for shark and other fish	6	

Q.16 How many pots are you licensed to operate?

No. of pots .... |__|__| V93

Code no.

Q.17a. Assuming there were no restrictions on the number of pots, what would be the ideal number of pots to fish from the boat you are currently skippering?

No. of pots .... |__|__|__| V94

Code no.

Do not know 0

b. What is the size of the boat you are currently skippering?

Length in meters .... |__|__|__|__| V95

decimal point

c. What type of hull does your boat have?

Planing	1	
Conventional	2	V96
Other	3	

d. What is the hull made of?

Board	1	
Marine Ply	2	
Metal	3	V97
Fibre Glass	4	
Cement	5	

OFFICE USE ONLY

Q.18a. Have you upgraded, downgraded, or changed your boat in the past three years?

Yes 1
No .... 2 — Go to Q.18d.
Does not own boat 3
V98

b. Was the previous boat? ......

Smaller 1
Same 2
Larger 3
V99

c. What was the hull of the previous boat?

Planing 1
Conventional 2
V100

d. Are there plans to upgrade or change your present boat?

Yes 1
No 2
Do not know 3
V101

e. Would it be a boat with a ...

Conventional hull 1
Planing hull 2
Either 3
Do not know 4
V102

f. Is your boat and authority currently on the market?

Yes 1
No .... 2 — Go to Q.18h.
V103

g. What price are you seeking for your boat and authority?

$ .... |_|_|_|_|_| V104
Code $

Do not know 0

h. What price would you expect your boat and authority to be worth on the market today?

$ .... |_|_|_|_|_| V105
Code $

Do not know 0

Q.19a. Have you bought any additional pot authorities in the last year?

Yes 1
No .... 2 — Go to Q.19d.
V106

b. How many?

No. of pots .... |_|_| V107

c. What was the highest price you paid for a pot authority?

$ .... |_|_|_| V108

d. What would you be willing to pay for an additional pot authority today?

$ .... |_|_|_| V109

OFFICE USE ONLY

Q.20a. During the 1978-79 season, how many bags of crayfish did you catch - including those taken home or sold for cash?

.... [| | |] Code no. V110

Do not know 0

b. and how many bags for the 77/78 season?

.... [| | |] Code no. V111

Do not know 0

Q.21a. What would you consider to be the minimum number of bags of crays you would need to catch in this season to make it economically worthwhile to remain a crayfisherman?

No. of bags .... [| | |] V112

Do not know 0

b. Would you expect to supplement this catch by going sharking or some other form of fishing?

Yes	1	
No	2	V113
Do not know	3	

Q.22a. What processors did you sell your crays to in the 1978-79 season? (Indicate as many as relevant).

Code 1 = yes
0 = no

SAFCOL	1	0	V114
Fishbrook	1	0	V115
Milan Rapp	1	0	V116
Raptis	1	0	V117
Carpenter Rocks Co.	1	0	V118
Other	1	0	V119

b. What processors are you selling to, or intend to sell to in the current season? (Indicate as many as relevant).

Code 1 = yes
0 = no

SAFCOL	1	0	V120
Fishbrook	1	0	V121
Milan Rapp	1	0	V122
Raptis	1	0	V123
Carpenter Rocks Co.	1	0	V124
Unit Trust	1	0	V125
Other	1	0	V126

INTERVIEWER: *It is important that we get data on the income and costs of fishermen. This will necessitate your going to records that may take some time. Would you please take this sheet (hand supplement sheet to the respondent) and answer the questions on it, then return it to us in the reply-paid envelope.*

OFFICE USE ONLY

Q.23 The following issues are said to be of interest to crayfishermen. Please indicate whether you agree or disagree with each statement.

(Interviewer: hand card 2 to respondent and ask him to reply to 1, 2, 3, 4, 5 to each statement - explain what the numbers on the scale mean)

Statement							
a. It is desirable that the number of crayfishing licences be pegged as they are	1	2	3	4	5	0	V127
b. Pot allocation should not be related to vessel size	1	2	3	4	5	0	V128
c. The top boats should be encouraged to move into another fishery	1	2	3	4	5	0	V129
d. Survey requirements are too strict	1	2	3	4	5	0	V130
e. Fees per pot should be increased so as to cut out inefficient fishermen	1	2	3	4	5	0	V131
f. Each port should have a designated zone in which its boats are restricted to fish	1	2	3	4	5	0	V132
g. There should be a pot reduction of 10 per boat	1	2	3	4	5	0	V133
h. The government should not interfere in the economic management of the cray fishing industry	1	2	3	4	5	0	V134
i. Crayfishermen from other ports should not be permitted to move to this port and fish from here	1	2	3	4	5	0	V135
j. In crayfishing, limited entry is necessary to manage the resource	1	2	3	4	5	0	V136
k. Present radio communications are satisfactory	1	2	3	4	5	0	V137
l. The price received from processors for crays is a satisfactory price	1	2	3	4	5	0	V138
m. There are too many crayboats fishing in the Southern Zone	1	2	3	4	5	0	V139
n. Fines for taking undersized crays should be substantially increased	1	2	3	4	5	0	V140
o. As crayfish are a common property resource, some form of government intervention in the industry is necessary	1	2	3	4	5	0	V141
p. Deckies should have pot allowances made available to them according to time spent in the industry	1	2	3	4	5	0	V142
q. Pot authorities should be non-transferable	1	2	3	4	5	0	V143
r. Port charges should meet the costs of providing port services	1	2	3	4	5	0	V144
s. Sharking should be made a limited entry fishery	1	2	3	4	5	0	V145
t. There should be more policing of undersized crays	1	2	3	4	5	0	V146
u. My dealings with the Department of Marine and Harbours have been satisfactory	1	2	3	4	5	0	V147
v. The use of pots by amateurs has little effect on yields	1	2	3	4	5	0	V148
w. The taking of berried females has little effect on future cray yields	1	2	3	4	5	0	V149
x. Crayfishermen should be permitted to fish the Murray River for carp to use as bait	1	2	3	4	5	0	V150
y. My dealings with the Department of Fisheries has been satisfactory	1	2	3	4	5	0	V151
z. If established, a buy-back authority would be more effective if pot authorities were non-transferable	1	2	3	4	5	0	V152

Q.24 How do you operate your affairs as a fisherman?
(Interviewer: do not read, but code answer in one of these categories)

Single owner	1	
In partnership with a family member(s)	2	
In partnership with non-family member(s)	3	
Proprietary company	4	V153
Trading Trust	5	
Public Company	6	
Not Answered	0	

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Q.25 Do you have investments in the S.E. in any of the following -

Where

Code 1 = yes
0 = no, not ans.

Where	Investment			Office use
________	Farming	1	0	V154
________	Property related to tourism	1	0	V155
________	Property/business related to fishing industry	1	0	V156
________	Any other form of property	1	0	V157
________	Shop, business	1	0	V158
________	Other investments	1	0	V159

Q.26a. Are you a member of any of the following -

Code 1 = yes
0 = no

Professional Fishermen's Assoc.	1	0	V160
SAFCOL	1	0	V161
Unit Trust	1	0	V162
Any other (state) ____________ ...	1	0	V163

b. Do you find it necessary to make use of any of the following services -

Code 1 = yes
0 = no

Accountant/Tax agent	1	0	V164
Insurance agent	1	0	V165
Lawyer	1	0	V166
Department of Fisheries	1	0	V167

c. In which town do you bank?

State ______________________ .... ☐☐ Code later V168

Q.27 What social, sporting, business or service organization do you belong to?

Code 1 = yes
0 = no

Service	1	0	V169
Sporting	1	0	V170
Cultural	1	0	V171
Religious	1	0	V172
Other	1	0	V173

Q.28 Excluding day-to-day expenditure on food, drink, petrol etc., what proportion of your household expenditure on other major items, such as furniture, good clothing, electrical goods etc. would you spend in your home port, Mt. Gambier, Millicent or elsewhere?

	0%	0-20%	20-40%	40-60%	60-80%	80-100%	100%
Home Port	1	2	3	4	5	6	7
Mt. Gambier Millicent	1	2	3	4	5	6	7
Elsewhere	1	2	3	4	5	6	7

☐ V174

☐ Code no. in box V175

☐ V176

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I am now going to ask you some specific questions about the Copes Report.

Q.29a. Do you agree with the proposition that there are too many boats in the crayfishing industry in the Southern Zone?

Yes 1
No .... 2 — V177
Do not know 3

b. Copes recommends that up to 1/3rd of the boats should be brought out - do you agree with this?

(Interviewer: If 'yes', enter 33%, if not find out whether this is too high, too low and code proportion of boats) .... Code % — V178

c. Do you think that a buy-back in some form is an appropriate way of reducing the number of boats?

Yes 1
No .... 2 — V179
Do not know 3

d. How do you think a buy-back authority should be administered?

____

____

To be coded later

e. Other than buy-back, what other forms would you suggest for reducing effort?

____

____

To be coded later

Q.30 Let us assume that the Government and the industry were to decide that a buy-back authority was to be established with the aim of buying vessels out of the industry to reduce effort, and that this was to occur in 1980 -

a. Given a satisfactory price, would you be interested in selling your boat and authorities to a buy-back authority?

Definitely yes 1
Perhaps .... 2 — V180
Not at all 3
Go to Q.31 — Do not know 4

b. What total price would you want to receive for both boat and authority?

$ .... ________ Code $ — V181

Do not know 0

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Q.31 Copes recommends that under a buy-back scheme, a proportion of the pots taken out should be redistributed among the remaining boats -

a. What proportion do you think should be redistributed? .... ______ V182

Code %

Do not know 0

b. Given the opportunity, would you buy more pot authorities?

Yes	1	
No	2	V183
Do not know	3	

Go to Q.32

c. What price would you be willing to pay per pot authority for additional pots obtained in this way?

Price per pot .... ______ V184

Code $

Do not know 0

Q.32 Still assume that a buy-back authority was established. Assume as well that to help finance it, those remaining in the industry would be required to pay something towards the cost of running the scheme.

a. What would you be willing to pay per year for each boat that was taken out of the port?

Amount .... |_|_|_|_| V185

Code $

Do not know 0

b. How much would you be willing to pay each year if 1/3rd of the boats were taken out of the Southern Zone?

Amount .... |_|_|_|_| V186

Code $

Do not know 0

c. Suppose an annual levy was imposed, in addition to existing licence and survey fees, on boats remaining in the industry. I am going to read out an increasing scale that this annual levy would be. I want you to indicate at what point you would seriously be tempted to sell out to a buy-back authority supposing that you had received an acceptable price for your boat and authority.

Interviewer: read out each $ amount working down the list. Be sure you find out the point where the respondent starts to waver in his assurance that he would still remain in. Press the point if necessary as to the level at which there are doubts about remaining in, and where he may be tempted to sell out.

Code by circling the appropriate level & its number

500	01	
1000	02	
1500	03	
2000	04	
2500	05	
3000	06	
3500	07	
4000	08	
4500	09	
5000	10	
5500	11	
6000	12	
6500	13	
7000	14	V187
7500	15	
8000	16	
8500	17	
9000	18	
9500	19	
10,000	20	

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Q.33a. If you were to sell your boat and authority to a buy-back authority, or if you left the industry by selling your boat to another fisherman, what work would you do?

(Interviewer: write down response, then code it according to one of the general categories)

____

____

____

Code
1 = retire
2 = other fishing
3 = go back to former trade/job
4 = outside fishing - farming
5 = live off investments or business venture
6 = other
0 = not answered V188

b. Would you expect government assistance to do this?
(Interviewer: probe for details of what type of assistance)

Yes	1	
No	2	V189
Do not know	3	

____

____

____

Code
1 = retraining scheme needed
2 = subsidy needed
3 = both
4 = other V190

c. Would this require you to move from where you presently live?
(Interviewer: probe to find out where this would be)

Yes	1	
No	2	
Do not know	3	V191

____

____

____

Code
1 = to another SE port
2 = other SA fishing port
3 = to another SE town
4 = to Adelaide
5 = fishing port interstate
6 = other interstate/overseas
7 = do not know
V192

Q.34 Finally a few questions about yourself and your family.

a. What is your age? Yrs.... [|] V193

b. Marital status?

Go to Q.34f. ← Single	1	
Married	2	
Separated/Divorced	3	V194
Widowed	4	

c. What number of dependant children do you have? No. .... [ ] V195

d. In financial year 1978-79, did your wife have a

part-time job(s)	1	
full-time job	2	V196
Go to Q.34f. no job	3	

e. What did she do, and where was the job located?

Job	Location

(Details to be coded later) → Q.34f. ...../14

Code
1 = local, connected with fishing
2 = local, not connected with fishing
3 = outside port connected with fishing
4 = outside port not connected with fishing
0 = no job

V197

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Q.34f. Is your present dwelling -

	Rented by you	1	
	Being purchased by you	2	
	Boarder in private home	3	V198
Go to Q.34h.	Fully owned by you	4	
Go to Q.34h.	Your parents home	5	
Go to Q.34h.	Other	6	

g. What is the monthly rent or mortgage payment?

	$	Code $	V199
	Do not know	0	

h. Where were you born? ____________________ ....

1 = local port
2 = other SE
3 = Adelaide
4 = other SA
5 = interstate
6 = overseas

V200

i. How many years have you lived in the port/town you currently live in?

No. of years		V201
Do not know	0	

j. How many different towns/places have you lived in since 1968?

No. of places		V202
Do not know	0	

k. What age were you when you left school?

Age in years		V203
Do not know	0	

l. Do you have any professional or trade qualifications?

Yes	1	
No	2	V204
Do not know	3	

Specify: ____________________

m. Is any member of your family or immediate relation working as a full-time fisherman, or has any member of your family ever done so?

Yes	1	
No	2	V205

n. Which of the following?

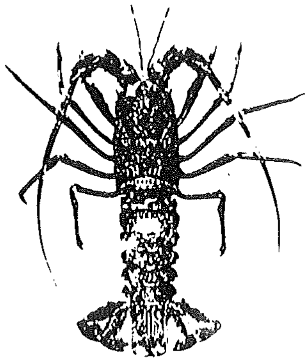
Father	1	
Brothers	2	V206
Son	3	
Brother-in-law	4	

o. Do you have a son whom you expect will take over your boat at some time in the future?

Yes	1	
Has son, but no ...	2	
Has son, don't know ...	3	V207
Does not have son ...	4	

SOCIO-ECONOMIC STUDY OF THE ROCK LOBSTER INDUSTRY IN THE SOUTHEAST OF SOUTH AUSTRALIA

- A CASSR RESEARCH PROJECT -



FIRST PROGRESS REPORT

to

THE AUSTRALIAN FISHING INDUSTRY COUNCIL (SA BRANCH INCORPORATED)

"DISCUSSION PAPER ON THE FISHERMEN'S PANELS CONDUCTED IN THE SOUTHERN ZONE"

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INTRODUCTION

Crayfishing in South Australia dates back to the 1870s, but the industry did not really take off until 1945 when SAFCOL and several other fishermen's co-ops. were formed. Frozen lobster tails began to be exported to the United States shortly after, and since the mid-1950s, when the South African industry went into decline, South Australia has cornered a large part of the U.S. market.

Many South Australian fishermen switched from school shark fishing to crayfishing to meet the American market. There was some spare capacity in the local fishing industry anyway as demand for school shark liver oil had declined following the development of synthetic sources of vitamin A.

The increased American demand for crayfish resulted in a rapid growth of the South Australian industry. More boats and an increasing yield of rock lobsters started to pose a threat - could the fishery survive higher levels of activity? This problem was studied by the Crayfish Advisory Committee and controls were introduced in 1968 to limit the amount of fishing. Subsequent legislation in 1971 placed constraints on both the number and distribution of pots, further limiting effort.

In spite of these controls, it became apparent that effort continued to increase. Fishermen worked longer hours which effectively increased the number of boat days and pots lifted. The introduction of mechanical haulers also increased efficiency and, therefore, the number of pots lifted. Sonar has enabled skippers to site their pots more accurately, yet again adding to their efficiency. Better boats, and particularly the introduction of planing hulls have meant that some fishermen have cut down the time taken both to get to lobster beds and also between pots.

The outcome of this increased effort, given the natural limit to the number of crayfish available, has been to raise the total costs of the industry with little or no increase in yields. Changes in the industry have also caused some redistribution of earnings in favour of those able to introduce technological innovations - although the high fuel bills of boats with planing hulls, combined with increased fuel prices may have more than compensated for the comparative advantage that these hulls provided. The realisation that more effort in the industry led to higher costs for a fixed supply of lobsters, despite earlier controls, has led to the current re-evaluation of the industry.

It is important to note that concern about the industry has been expressed both by fishermen and fishermen's representatives (as through AFIC), and the Fisheries Division, South Australian Department of Agriculture and Fisheries. Consequently, Professor Copes of Simon Frazer University, British Columbia, was contracted to study and report on ways in which the economic condition of the industry might be improved.

Copes reported in early 1978 and recommended that the numbers of boats involved in crayfishing should be reduced by the use of a "buy-back" scheme*. This raised many questions in the minds of fishermen and so the Australian Fishing Industry Council (SA Branch Incorporated) contacted the Centre for Applied Social & Survey Research (CASSR) at Flinders University to carry out a socio-economic study of the southern rock lobster zone. The sort of questions that had to be answered were who would be involved in a buy-back scheme and how would the scheme affect both individuals and the towns in the southern rock lobster zone.

The CASSR study has three main stages. First there is a "pilot" study of crayfishing in the

* Refer to Appendix A which gives summary of Copes Report recommendations.

Northern Zone of South Australia which helps the researchers prepare for detailed work in the Southern Zone. Secondly, and this is the subject of this report, researchers from CASSR spent a week at the beginning of June in the Southern Zone meeting skippers and deckhands. With the assistance of local representatives of the Professional Fishermen's Association, we organised a series of "panels" to discuss social and economic factors relevant to the industry. The panels were informal meetings where fishermen were able to express themselves freely. These discussions, together with the pilot study, are essential background for the third stage of the research which will be a questionnaire survey of all fishermen in the industry.

We held separate panels for skippers and deckhands where possible; this was partly because skippers are more actively involved in the industry, but mainly because we suspected that any scheme might have different effects on the two groups. The system worked well; most meetings were well attended although there were usually more skippers than deckhands. (Table 1).

During the CASSR visit to the six fishing ports we also began to collect information on local businesses, as it is important to know how much effect any new scheme would have on the economic life of the whole communities. We are also preparing accurate land use maps of the ports as part of the study.

SOME GENERAL OBSERVATIONS ON THE PORTS

It soon became apparent to us that there are many important differences between the ports. Some of these are obvious, like the variation in size of the towns and the level of fishing activity as a proportion of the town's livelihood. Others are less immediately obvious, for example the different historical development of the port and the sorts of community relationships which have been built up.

In addition there are significant physical differences in the nature of the continental shelf which affect the distribution of crayfish and which therefore partly explain different approaches to fishing. To the southeast of Kingston the distance to the shelf edge gets less, also the bottom changes from sand and limestone reefs to tertiary basalt. Bottom conditions affect how fishermen place their pots. From Carpenter Rocks to the east, it is not so important to site individual pots accurately and fishermen usually set out strings of pots. To the west of Carpenter Rocks, fishermen have to be more selective in placing their pots. Bottom conditions affect the densities of crayfish as well, most coming from rocky bottoms, so we are likely to find higher densities of rock lobster east of Carpenter Rocks. Considering the small area of shelf though, it is debatable whether there are more crays off Port MacDonnell than the other ports. What did emerge from the panels was that some kind of informal "zoning" scheme is already in operation - or certainly that used to be the case.

In spite of the restriction in shelf area, 29% of the Southern Zone fleet is located in Port MacDonnell. (Table 2). A possible explanation for this distortion of harvest effort is the attraction of the amenities provided by Mt. Gambier.

The difference in bottom conditions partly explains attitudes towards "over-potting", as it would be easier to use extra pots when they only need to be dropped off in rows. However, the high number of operators and resulting competition for the limited number of crays could also tempt some fishermen into "over-potting".

One more difference between the ports is worth noting, and that is Southend's uniqueness. Southend came into existence after the War along with Carpenter Rocks, (though unlike the latter it is not a one family town), it exists only for rock lobster fishing. Despite having the second largest number of boats there are very few other industries or amenities. (Table 3).

30

The panel meetings clearly revealed that quite different attitudes existed towards the industry in general, and any buy-back scheme in particular, in the different ports. Of course, many views were shared and similar questions raised, but just as there are often differences between individuals, so too we found that fishermen in any one place tended to share views that those coming from another port might generally disagree with.

BUY-BACK

From the discussions held, there appeared to be consensus that there were too many boats and that some form of effort reduction was needed so that fishermen as individuals and the industry as a whole would be better off. There was some feeling that fishermen should sink or swim according to their own ability - those with this viewpoint tended to see the buy-back as an attempt to help those in financial trouble.

Although there was support, in principle, for some reduction in effort, there were strong disagreements over the ways in which this should be done. This was a good example of the way in which there was both variation between individuals and between ports. Fishermen had given the whole issue a lot of thought, though some had clearly gone into the pros and cons of various schemes a lot more thoroughly than others.

The strongest impression that we received was that of suspicion and rejection of a buy-back scheme as proposed by Copes. Many fishermen were worried about the Copes Report and wanted to know what a buy-back scheme would involve, how and by whom it would be administered, and particularly whether they would be able to have any say in what happened. Some were in favour of a government administered scheme, and would be willing to pay up to $200 additional licence fee for every boat removed.

More frequently, however, there was opposition to government intervention and a reluctance to pay higher fees. Other possibilities were suggested. Many skippers suggested that a reduction in the number of pots per boat would be better. Other skippers and deckhands proposed an extended closure, or even zoning regulations. Some surprising suggestions were made - "get rid of the most efficient boats" and even "give the top twenty boats prawn licences instead". Some skippers were worried that pots might be bought out, resulting in higher licence fees, only to be redistributed later on.

It was felt that those who would leave the fishery would be those about to retire, those having uneconomic operations, and those having other employment opportunities. In support of this view, it was pointed out that there are a large number of boats and associated authorities available for purchase each year (though many of these are existing fishermen changing units). In one port it was suggested that several owner/skippers would like to leave the industry but could not afford to do so because of the capital tied up in their boats, lack of alternative employment, and also the costs of having to move elsewhere.

One point bears repeating and emphasising. Most fishermen, whilst suspecting that it would be difficult in practice to cut back on levels of activity, wanted to see any scheme of effort reduction managed by fishermen themselves. They also preferred that existing fishermen should be able to buy others out, and also that existing deckhands should, where possible, be able to become skippers eventually. There was a general fear that a buy-back scheme would increase costs of entry and change the nature of new entrants to the industry.

ECONOMIC FACTORS

Concern was often expressed over the way that the price that fishermen get for lobsters has not gone up as quickly as their costs. They are, however, virtually forced to accept the going rate as prices are dictated by world markets rather than local factors. Ironically, world markets have also added to fishermen's fuel bills which have been a major factor inflating overall costs.

Several fishermen were concerned with the change in relative economic status vis-a-vis other members of the community. They felt that as their industry possessed several natural and economic risks and uncertainties, they deserved a higher income than some other groups. Although they had received this in the past, any comparative advantages had been eroded.

In relation to the increased costs due to technical change, it was certainly the exceptional fisherman who saw that technological innovations, which had been voluntarily accepted, increased costs. Innovations, such as planing hulls, were understandably seen as a means whereby the individual operator could increase yields - although some saw that such an innovation need not necessarily increase net returns.

NON-AUTHORITY CONSTRAINTS ON ENTRY

From our discussions, it was apparent that fishermen perceive several constraints which limit entry into the fishery. In most ports the only factor which limited the number of deckhands was simply the number of positions available but the switch from being a deckie to skipper/owner is restricted by financial and technical constraints.

In financing boat purchases there appeared to be a lot of variation between individuals in their ability to obtain loans from banks using the boat as collateral. In some cases this was overcome by getting processors to act as guarantor. The apparent reason for banks being hesitant in using boats as collateral is because a boat is defined, in the technical jargon: as a "sinking asset" (!)

At present the cost of boats and pot authorities ($250 per pot) plus $40 per pot for the pots themselves place financial constraints on entry. It takes at least three to four years for very successful deckies to raise the capital for the deposit - 25 to 33% of boat price. Various requirements of the Department of Marine and Harbours also add to the level of initial capital costs.

Although the monetary costs of obtaining a Certificate of proficiency are minimal, the cost of obtaining and meeting survey standards can run into a substantial amount, in particular the single sideband radio telephone costs about $2,000.

At present most cray boats can be handled by a skipper having a Certificate of Competency as Skipper (Grade II) and having a Certificate of Competency as Marine Motor Engine Driver (2nd Class). These are obtained by taking an oral exam and meeting the age and experience requirements. It appears that although the examination is oral, illiteracy has been a constraint on some deckies. For some illiteracy could become a greater constraint on entry as examination standards are upgraded - this would bear watching as it may affect the proportion of local ownership.

Prospective skippers also have to satisfy medical standards including a sight test and test of hearing. In the past colour-blindness may have gone unnoticed but will probably bar some prospective skippers in the future.

BUYERS/PROCESSORS

During the panels many different views were expressed about buyers and processors, ranging from hostility to complete satisfaction. In ten towns (eight of which are ports) there are 24 centres representing ten buyers. To cover those ports not having a buyer, some processors use freezer vans to pick-up catches. In addition some fishermen sell small portions of their catch to tourists and fish shops.

EMPLOYMENT OPPORTUNITIES

The question of alternative sources of employment is clearly important to any discussion of reducing the number of boats in the fishing industry. It was apparent from the panels and other sources that there is a severe lack of employment opportunities throughout the area. Even at the present time, besides some employment in sharking, most of the limited winter employment opportunities consist of seasonal agricultural work (for example, tree planting, fencing), building work, council labouring or fox shooting. The summer tourist season does result in some increase in employment opportunities, but these opportunities are short lived and low paying. Some skippers, making use of the opportunities provided by the tourists, have diversified into side interests supplying or managing appropriate services. It is possible that some boats taken out of lobster fishing could be used in charter fishing, but, because of the distance from major centres of population, any such scheme would need some careful packaging to have much effect.

As the lumber industry based around Mt. Gambier and Millicent supplies some employment opportunities, unemployment may not be so severe in the southern part of the region. It is expected, however, that the timber industry will substitute capital for labour in the future and so the number of jobs will be cut. The jobs remaining will have a higher technical bias and could well be filled from outside the area.

Employment opportunities and the economic base of the ports as a whole could further suffer as the removal of fishermen from the industry will tend to change the earning patterns of those remaining and subsequently to change their expenditure patterns. Thus, even if the amount of money coming into the port may stay fixed, those who remain could earn more but tend to spend their increased earnings outside the ports themselves - what economists call the "local multiplier effect". Secondly, employment arising as a result of incomes earned in lobster fishing will fall. Employment associated with handling lobster may either remain constant or fall, depending on whether the processors rationalize their operations.

At this time the only local industry likely to expand is the tourist industry. It is doubtful, however, whether this will be of much help to existing fishermen, as the number of positions would be limited and, again, may not be available to those currently employed in crayfishing. In recent years it has proved increasingly difficult for deckhands to get work during the off-season. Many deckhands now avail themselves of the opportunity to register at the CES (following the voluntary winter closure being introduced) although the proportion varied between ports, some being very reluctant to register.

For some skippers the problem is unlikely to be serious, as they will be the ones who will have the choice of remaining in the fishing industry or moving out. If they do move out, often it would be into retirement; in addition they would have the capital (including incentive payment) to set up elsewhere.

Of those to whom we spoke the feeling was that if they were to stop crayfishing and wished to find some other form of work, then they would prefer to remain in fishing. Such a transfer would involve a minimum disturbance of established life style and would make best use of present skills.

The fisheries which might show some room for future development include leather jacket, squid, tuna, and deep sea trawling. In terms of the capitalization necessary to enter the fishery, leather jacket would be the easiest to enter although the extent of the resource is uncertain. Both squid and deep sea trawling involve large amounts of capital, though one or two skippers suggested that it is possible that some lobster boats could get squid if associated with a larger mother ship. With the excellent port at Portland, however, it is unlikely that any deep sea trawling will be based out of any of the southeastern ports. Some boats have recently turned to trolling for tuna with varying success, though nobody could be sure how consistently the tuna would be available. Extra capital outlay for tuna fishing is minimal, though, again, the size of the resource is uncertain and so the number of boats that could operate viably cannot yet be established.

SHARKING

Sharking and crayfishing have been closely related over the years, both since the switch from sharking to crayfishing in the 1950s and today with many cray boats going sharking during the winter months. Concern was expressed, however, that any buying out of lobster fishermen will reduce individual shark catches as some of those taken out of the lobster fishery may move full time into sharking. At present several fishermen fish for shark full time, but retain their cray authority both as a fall-back against the possibility of reduced shark catches and as a capital asset. If sharking was a limited entry fishery some might surrender their cray authorities (though in the short term, of course, this would hardly reduce effective effort in the crayfishing industry).

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APPENDIX A

Due to the productive potential of rock lobster in South Australia, the ease of capture and high value of this resource, and the management of this population under a single administrative body - the S.A. Government - Copes observed that it is quite possible for large net economic returns to be obtained from this resource.

He suggested that the present division of the fishery into Northern and Southern Zones be continued, and that separate management strategies be applied. Any management strategy for the rock lobster fishery should also include -

1. An Effort Management Authority (E.M.A.), made up of industry and government representatives, be established to institute a management programme whereby fishing effort is controlled so as to achieve a satisfactory balance between fishing effort and yield.

2. That, in the Southern Zone, the E.M.A. achieve this satisfactory balance between fishing effort and yields by use of "generous licence withdrawal bonuses and guaranteed compensation for retired vessels and gear."

3. That this "buy-back" scheme be financed through the use of a resource use fee levied on individual pots. Initial bonuses and compensation being financed through loans.

4. That, in future, authorities are not transferable on the open market, but that a proportion of retired licences be made available according to the length of time an individual has spent in the industry.

6. That smaller units should be made more efficient through the allocation of additional pots.

TABLE 1: PEOPLE ATTENDING MEETINGS BY TOWN & GROUP

Town	Date	Nos. of Skippers	Nos. of Deckies	Sub-Total
Kingston	4/6/79	14	6	20
Robe	5/6/79	8	12	20
Southend	6/6/79	14	7	21
Beachport	6/6/79	4	2	6
Carpenter Rocks	7/6/79	11 1 Crew (Single meeting)		12
Port MacDonnell	7/6/79	16 1 crew (Single meeting)		17
Sub-Total		67	29	96

TABLE 2: DISTRIBUTION OF BOATS AND POTS

Port	No. of Boats		Av. Length in Metres	Standard Dev. of Len.	No. of Pot Authorities		Mean No. Pots/Bt.	S.D. of Pots/Boat
Kingston & Cape Jaffa	36	14%	9.025	2.46	2146	13%	50.61	14.14
Nora Criena	3	1%	10.23	2.53	96	.6%	65.33	.58
Robe	40	16%	11.06	2.93	2756	17%	68.	10.2
Beachport	21	8%	9.67	2.33	1370	8%	65.24	13.98
Southend	42	17%	10.68	2.18	3025	18%	72.02	10.56
Carpenter Rocks	23	9%	10.8	2.76	1616	10%	70.26	13.64
Blk. Fellows Caves	12	5%	7.41	3.02	604	4%	50.33	16.0
Nene Vy.	3	1%	6.4	1.35	155	1%	51.67	17.30
Port MacDonnell	72	29%	9.55	2.31	4626	28%	65.15	13.2
	252				16394			

TABLE 3:

Town	Number of Businesses Observed
Kingston	51
Robe	47 plus 8 sites having apartments or flats
Beachport	20
Southend	6
Carpenter Rocks	2 - both owned by the company
Port MacDonnell	19

A SOCIO-ECONOMIC STUDY OF THE ROCK LOBSTER INDUSTRY IN THE SOUTH EAST OF SOUTH AUSTRALIA *

by

E.A. Cleland & R.J. Stimson

The Centre for Applied Social & Survey Research (CASSR)
The Flinders University of South Australia.

1. BACKGROUND TO THE STUDY

In early 1978 the Copes Report, RESOURCE MANAGEMENT FOR THE ROCK LOBSTER FISHERIES OF SOUTH AUSTRALIA, was issued by the S.A. Department of Agriculture and Fisheries. Among other things, Professor Copes, a Canadian fisheries economist, recommended that a vessel buy-back scheme be introduced in the rock lobster industry in the southern zone of South Australia in order to reduce effort in the industry. While it appears that most people connected with the industry agree that there is a need for effort reduction to help overcome structural problems being experienced by the industry, the fishermen in particular reacted strongly to the proposal for a buy-back aimed at reducing by up to 100 units the number of vessels in the industry. At the June, 1978 meeting of the South Eastern Professional Fishermen's Association a resolution was passed requesting the Government of South Australia to refrain from implementing the Copes Report recommendations until a thorough socio-economic study of the industry had been conducted. Support for this study also came from the Australian Fishing Industry Council, S.A. Branch (AFIC), and was backed by the S.A. Department of Agriculture and Fisheries.

In late 1978, the Centre for Applied Social & Survey Research (CASSR) at Flinders University was approached by representatives of AFIC, the S.E.

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* Paper presented to a Forum on the South Eastern Fishing Industry, conducted by the South Eastern Professional Fishermen's Association, Inc., at Mount Gambier, on 8th June, 1979.

Professional Fishermen's Association and the Department with the request that it undertake the proposed socio-economic study. An application was made to the Fishing Industries Research Trust Account, Department of Primary Industries, Canberra, in December 1978, and in March 1979 the Minister for Primary Industries announced that a grant of $52,800 had been awarded to AFIC for CASSR to undertake the study.

2. WHY CASSR?

It is a reasonable question to ask why CASSR is an appropriate organization to undertake a socio-economic study of the rock lobster industry in South Australia. Certainly it is not a research group expert in the fishing industry in general let alone the rock lobster industry in particular. However, the Centre has considerable expertise in conducting survey research and investigating and reporting upon social, economic and policy matters in Australia in general and South Australia in particular. While CASSR was formed as recently as 1977, its Research Associates and Research Staff have been actively engaged in applied social and survey research for over a decade at Flinders University. These studies have covered a wide range of fields, including recreational behaviour; retail shopping behaviour; road accident research; migration studies; residential location behaviour; demands for services such as health, welfare and education; political attitude studies; problems of gaining access to services and quality of life in isolated communities; job aspirations of school leavers; problems of Aboriginal communities; and the design and testing of safety symbols. In 1978 a total of 23 research projects involving survey methodology were conducted at CASSR.

The Centre's basic aims are to foster participation in the University in applied social and survey research and to interact with the community at large in undertaking contract and other research investigating specific social problems. The Centre is unable to do classified research, and maintains the right to publish the findings of its research activities irrespective of the funding source(s) supporting them. To this end it publishes its own Monograph and Technical Papers Series, and staff are encouraged to publish the results of projects in the usual academic journals. An important role of CASSR is to contribute to the methodological, technical and theoretical literature on survey research and applied social research.

Thus, being a University based research centre - and the only one of its type in South Australia - CASSR stands as a body independent of government and commercial interests. It is this independent status of CASSR, plus the experience and expertise of its staff in survey research and the investigation of social problems, that led to AFIC contacting the Centre to undertake this evaluation of the impact of effort reduction proposals on the rock lobster industry in the South East of South Australia through a comprehensive socio-economic study of the industry.

3. THE BRIEF

The specific objectives of the study are:

(i) To determine the likely success of any effort reduction programme introduced in the South East Rock Lobster Fishery;

(ii) To identify the type of fisherman and number who are likely to sell to a buy-back authority;

(iii) To estimate the range of incentives necessary to encourage fishermen to sell to a buy-back authority;

(iv) To assess the future prospects for boat owners, and crew of boat owners who sell their vessles to the buy-back authority;

(v) To estimate the cost of buying out a sufficient number of fishing units to ensure that those which remain will have every prospect of operating as a viable unit;

(vi) To assess the socio-economic effects on small fishing based communities.

In investigating these specific things within the overall context of a comprehensive socio-economic study of the rock lobster industry, it is necessary to emphasise that we will be reporting to the fishermen through AFIC. Obviously our findings will be more widely available. It will then be up to the fishermen and AFIC to decide how to use the information and what position they will take regarding buy-back or other alternative effort reduction proposals.

Probably this is the first time this type of study has been undertaken prior to the implementation of an effort reduction scheme. Certainly within Australia the study presents a magnificent opportunity for the development of a methodology for socio-economic investigation of a fishery with the aim of helping frame proposals (for rationalization) from within the industry.

4. THE METHOD

The research project began in April and will extend for a period of ten (10) months. A research strategy developed over recent years at CASSR is being employed. This ensures that the preliminary phase involves detailed consultation and discussions with all sections of the industry and relevant government authorities. This is followed by panel discussions (referred to as "search conferences" in market research) with skippers and crew in the six South Eastern ports (Kingston, Robe, Beachport, Southend, Carpenters Rocks, and Port MacDonnell). These procedures enable those most intimately connected with the industry to identify the range of issues that are considered important and what alternative rationalization (effort reduction) approaches should be considered. Concurrently the research team conducts an intensive literature review (both Australian and overseas studies) to ascertain relevant experience elsewhere and develop a theoretical framework within which the study is to be conducted to ensure comparability of data and to enable replication of the approach for future investigations of other Australian fisheries. These phases enable the research team to design questionnaires to be used in the surveys of fishermen (owners/skippers and crew) and families, plus selected businesses in the six ports. The surveys will collect data on the extent to which the issues are valid, seen as relevant, supported or rejected by the fishermen. A full census of skippers and crew will be taken and a sample of families. Obviously, the questionnaires are pilot tested before the surveys proper, and in this case this will be done in the Port Lincoln and Streaky Bay areas, following which modifications in the questionnaire will be made. Throughout this process consultation continues with AFIC and the elected representatives of the fishermen. Data is collected by the surveys proper using experienced interviewers where potential respondents are interviewed in private. Data coding, analysis, evaluation and report writing follows. It is intended that the results will be communicated back to the fishermen through meetings held in all six (6) ports.

The attached diagram outlines the sequence of these stages and indicates the timing of the various phases of the study.

This survey approach has proved successful in previous studies by CASSR investigating social problems in country areas of South Australia. The data collected should provide answers to points (i) to (iv) of the brief.

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Other methods of data collection and analysis are necessary to tackle points (v) and (vi) of the brief, but the survey data will form crucial inputs. It is envisaged that a series of scenarios concerning alternative rationalization/effort reduction schemes will be followed through to assess effects and costs (both economic and social) on those who leave the industry, those who remain in the industry, and the overall impacts on the socio-economic infrastructure of the fishing ports and their communities. Naturally a wide variety of data sources will be employed, such as census and other official data, and interviews with key personnel (e.g. bank managers, town clerks, school principals, shopkeepers) in all ports and nearby towns. Post-graduate students studying Community Psychology will be used to carry out part of the study assessing potential impacts of change on family life.

5. SOME RESULTS TO DATE

It is premature to discuss "findings" thus far because the sort of conclusions that can be drawn from consultations and the panel discussions require two to three weeks of appraisal. Some generalities may be ventured, despite the problems inherent in the highly qualitative impressions that have emerged from these data sources (due, for example, to the problem of people attending panels not necessarily being "representative" of all fishermen in any port, the tendency for the most vocal and forceful personalities to dominate discussions, and the inevitability that the view of "vested interests" are most readily apparent before issues are properly quantified as a result of the surveys that are to come).

But, we are able to offer these tentative, and no doubt obvious statements:

1. Every port is very different from every other.
2. There is considerable disagreement within each port on most issues except that some form of effort reduction is seen as being necessary by virtually all.
3. Buy-back is not unpopular as a proposed mechanism of effort reduction - so long as each individual is allowed to determine his own future as to whether or not to stay in the industry.
4. Buy-back is seen as a good way to "retire".
5. Views vary on the advantages/disadvantages of extended closure.

6. Pot quotas are a "hot" issue and opinion on what is the "best" level varies widely between ports and to a lesser extent within ports.
7. If there is to be buy-back, the chief concerns are over who will run it (not the government), how will the price be determined, and how much will it cost those left in industry?
8. It is probably fair to suggest that there are unrealistic notions on the ability of other fisheries to be viable alternative areas of employment for those who sell to a buy-back or who have other means.
9. Alternative sources of employment outside of other fisheries are generally "scorned" as serious propositions, and there is little notion of what "retraining" might be relevent or necessary if buy-back is introduced.
10. Crew may have unrealistic expectations of becoming skippers or being absorbed into other fisheries, and they certainly are not interested in employment outside fishing, but views varied between ports.

Perhaps most encouraging is the universal view that some boats <u>must</u> be removed from the industry <u>now</u> or the industry will experience accelerated decline.

The "64 pot" question is who is willing to move out, for what price, and how much are those who remain in willing to contribute to the cost of any effort reduction scheme? Hopefully we will be able to present some answers to this question in February 1980.

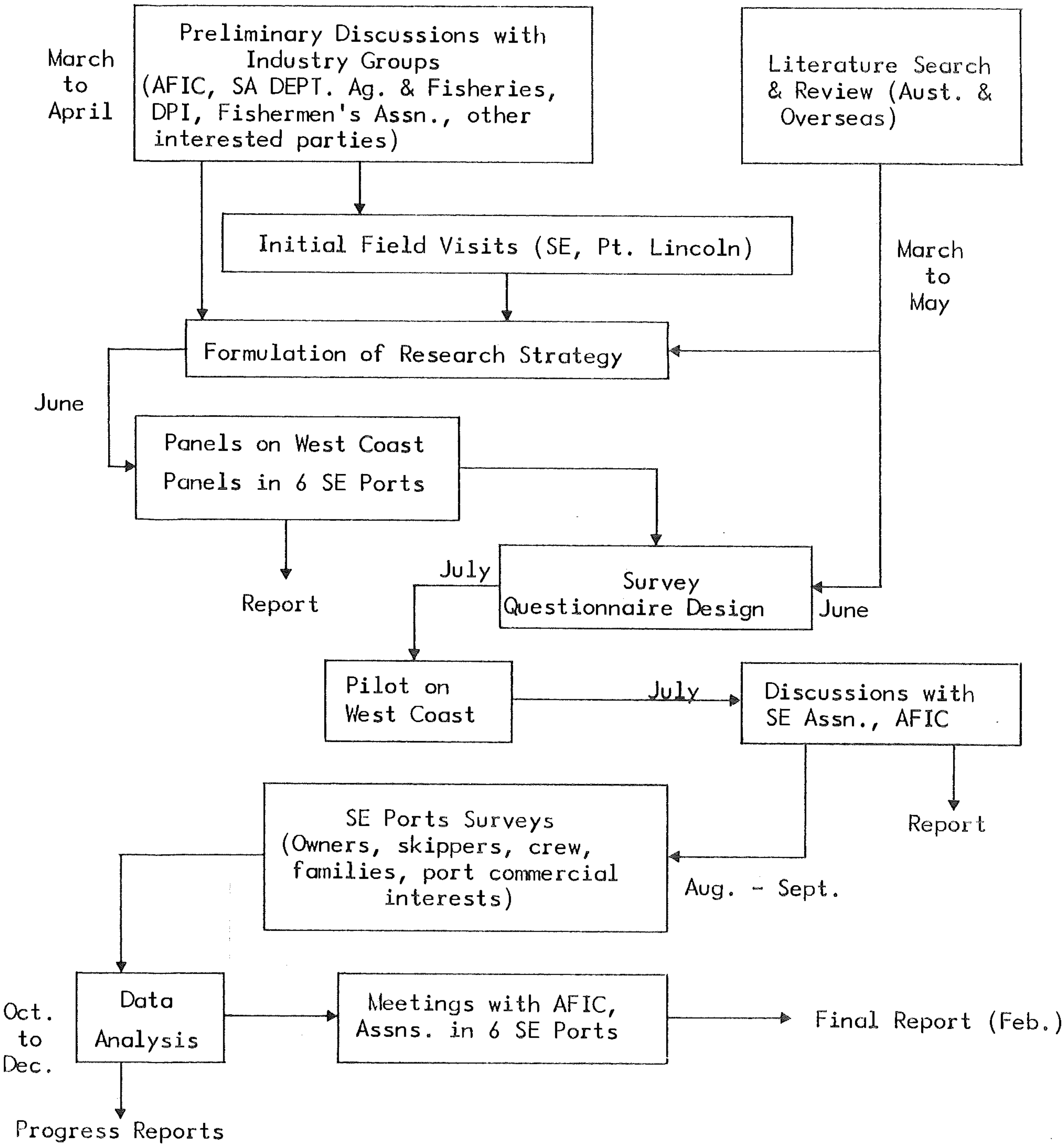
A NOTE ON CONFIDENTIALITY AND THE NEED FOR A GOOD RESPONSE RATE

It should be self evident that the success of this project depends largely on the willingness of those in the rock lobster industry to participate in all phases of the study, but most especially the personal confidential interviews. If AFIC and the bodies representing the industry are to make submissions to the government with viable proposals on the question of effort reduction, they must have an adequate data base on which to formulate their proposals. Data adequacy will depend directly on the level of response attained in the surveys and the accuracy of the data supplied to the interviewers.

Without these, data validity is questionable. As this study was originated by the fishermen, its outcome similarly will depend on their participation. If the level of interest and co-operation we have received so far is indicative of what we can expect throughout all phases of the study, then data validity will be ensured. We are confident this will continue for, as the President of the South Eastern Professional Fishermen's Association has said, this is your (i.e. the fishermen's) study.

As survey researchers we can give a categorical guarantee that data supplied in personal interviews by individuals will remain confidential and published data will be in aggregate form only in which no individual will be able to be identified. This guarantee is in accordance with the professional ethics to which survey researchers must adhere. Our experience is that over 90% of people are agreeable to participate in surveys and are only too keen to give more information than is required. As this is a "first" for the fishing industry and as the future nature of the industry will in part be determined by the outcome of the study, we are confident that we will not suffer from a deficiency of data.

STUDY STRATEGY



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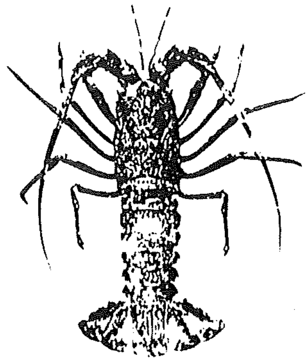
SOCIO-ECONOMIC STUDY OF THE ROCK LOBSTER INDUSTRY IN THE SOUTHEAST OF SOUTH AUSTRALIA

- A CASSR RESEARCH PROJECT -



SECOND PROGRESS REPORT

to

THE AUSTRALIAN FISHING INDUSTRY COUNCIL (SA BRANCH INCORPORATED)

"SURVEY METHODOLOGY"

Centre for Applied Social & Survey Research (CASSR)
School of Social Sciences,
THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA.

1. INTRODUCTION

This is the second of a series of reports from the Centre for Applied Social & Survey Research (CASSR) to the Australian Fishing Industry Council (AFIC) giving the progress made on the socio-economic study of the rock lobster industry in the Southern Rock Lobster Zone. It reports on methods used to collect survey data from those directly involved in the industry or likely to be affected by moves to rationalize it.

The report discusses the aims and methodology of the surveys. The response rates from respondents are discussed and work to be done is outlined.

2. THE PROBLEM

AFIC commissioned CASSR to carry out a socio-economic survey of the rock lobster fishing in the S.A. Southern Zone. In particular, the Centre was asked to look at what effect a buy-back, in the form proposed in the Copes Report, would have on:

(a) individual fishermen,
(b) the industry,
(c) local towns,
(d) the support participants leaving the industry would need,
(e) the willingness of fishermen in the Southern Zone to support such a scheme.

In addition, detailed data was to be collected on the socio-economic characteristics of persons engaged in rock lobster fishing and their attitudes to a wide range of management and related issues, especially effort reduction.

To address these questions it is necessary to assess the characteristics of those likely to participate in a buy-back scheme, the incentives necessary to elicit participation, and the local importance of the rock lobster industry *vis à vis* other industries in terms of employment, expenditures, and the number of people and services maintained by the fishing community.

3. METHOD

All owners and/or skippers of crayfish boats plus those who crew on vessels in the Southern Zone along with a sample of the wives of the skippers were surveyed. A mail survey of the managers of local business and an interview survey of the managers of banks and fish processing factories are also being conducted.

3.1 Questionnaires

Three different questionnaires or interview guides have been prepared. The first was used with owners, skipper-owners and employed skippers. A second, somewhat briefer questionnaire was used with deck-hands and a third with skippers' wives. Included in the skippers' questionnaire was a mail-in section relating to financial matters which very likely required the examination of records before they could be completed.

For a variety of reasons such as the length and conceptual complexity of the questionnaires and the need to obtain high response rates, data were collected by personal interviews. Training sessions were held for all interviewers, some of whom were professionals. The rest were either drawn from CASSR personnel or were post graduate students in Psychology at Flinders University who had been trained in survey methods. An Italian speaking interviewer was employed for work in Beachport and Southend.

A mail questionnaire is presently being constructed for use with all small businesses in the area. The survey of bank and of processing firm managers will not involve the use of formal questionnaire. However, an interview guide has been decided upon.

3.2 Sampling Frame

A complete list of fishermen with authorities to fish for lobster in the Southern Zone was obtained from the then Division of Fisheries, Department of Agriculture and Fisheries. Some details from this list were coded and entered into a computer file. This file now consists of a list, in alphabetical order of the boat owners, of all the owners, skippers and names of boats with cray authorities. Also included is the registration number of the boat, its length, number of pots authorised, number of deck hands, and the port out of which it is operating. Unfortunately the list provided was somewhat out of date but with the very helpful cooperation of fishermen in each port it was possible to update the required information. Most changes had resulted from the sale of boats and authorities - often to persons operating out of other ports. Changes in the number of pots and number of deck hands were also not uncommon.

The updated file was then used to print out individual lists for each port. Each port list consisted of an identification number and the name of the skipper, owner, an address to contact and some details of boat, crew and authority. All owners, skippers and crew were then sought for interview. These lists were also used as a frame to select a random sample of skippers' wives (one in two from Beachport and one in three from the other ports).

3.3 Sampling Procedure

The reason for taking a census of all fishermen is that future analysis will involve breaking the populations down into a number of sub-groups. As some sub-groups may contain a small number of people, a census removes the problem of sample error while maximizing the number of people in each sub-group. For surveying businesses by a mail questionnaire, we are unlikely to get the exceptionally high response rates that we have enjoyed with the fishermen, but cost constraints do not permit personal interviews to be conducted. For banks it was necessary to include all, simply as there are so few.

In sampling wives of skippers from each port a random sample was taken of skippers so that at least 10 or 33 1/3% (whichever was higher) of those having authorities were selected. (It should be noted that not all of these were married. However, no bias results from this procedure.)

The selection of processors was decided in the field. The criterion used in obtaining this "judgement sample" is related to proportion of catch handled and permanency. Table 1 summarises the methods of sampling used. Most remain to be interviewed.

3.4 Construction of the Questionnaire

The first stage in developing the questionnaire was for members of the research team to consult with AFIC officers and groups representing the industry and to visit the ports in the Southern Lobster Zone (see Report No. 1). The second stage involved making up a list of possible questions and arranging the questions into groups cutting out irrelevant ones. In the third stage these questions were used to make up the first draft questionnaire. Having compiled the questionnaire, the fourth stage was a round-table review of the questionnaire by the research team leading to the production of the second draft questionnaire. The fifth stage then was to pilot test the skipper and deck hand questionnaires on a sample of 30 skippers and 15 crew from the Northern Rock Lobster Zone.

Following the pilot test, the questionnaires were substantially rewritten, and the third draft discussed with AFIC officers and representatives of the Southern Zone ports. A final draft was prepared as the seventh stage, and these questionnaires were used to conduct the survey proper in August and September.

We were sufficiently confident with the range of responses to the skippers' and deck hands' questionnaires to pre-code most of the questions. The reason for this was to save coding time and to minimize coding error, which is likely to be higher when answers to open-ended questions are coded in the office.

At about the same time that the skippers' and deck hands' final questionnaires were drawn up, so too was the wives' questionnaire. In large part the wives' questionnaire was based on experience gained in developing the skippers' questionnaire.

The interviews with the bank managers and the processor managers did not involve a formal questionnaire, although there were certain questions which were consistent within any one group.

In all, four different kinds of questions were used in the questionnaires. Most required specific answers which were coded into pre-determined categories. There was a bidding sequence on one occasion in the skippers' questionnaire. Likert type scales were used in some questions in both the skippers' questionnaire and the deck hands' questionnaires to obtain attitudes to a wide range of management issues. Table 2 lists the types of questions according to questionnaire. AFIC has been supplied with a number of copies of the questionnaires.

3.5 Field Operations

Data collection in the field began on August 6 in Kingston and continued until 29 September. The sequence of ports surveyed was Kingston-Cape Jaffa, Robe, Beachport, Port MacDonnell and Carpenter Rocks (including Blackfellows Caves and Nene Valley), and Southend. The sample of wives were interviewed mainly in the week commencing 12 August. Up to 14 interviewers were in the field throughout this period, but the basic interviewing staff numbered 3 or 4 at any one time. Because of variations in size of ports and because of the variations in the dispersal of home addresses of skippers and crew, there was a great deal of variation in the time taken to complete each port. A minimum of three call-backs was used in attempts to interview all persons. Perhaps surprisingly, it was found much easier to contact fishermen on days that they had been fishing - particularly in the more southern ports. Thus, because of the generally poor weather conditions in August and September our task of contacting everyone was made difficult.

It should be noted that August and September in many cases are fished with rather less zeal than in other months. In fact many, particularly the farmer-fishermen, and several at Carpenter Rocks did not fish at all during the "winter". Many of those that did fish did not use their full quota of pots and thus did not take on a crew. Thus, on the one hand, many were very hard to contact and, on the other, the supposed deck hand simply did not exist. This latter point was not always made clear by skippers resulting in considerable time wasting on fruitless hunts for mythical crew. The result of all of this is that some mopping up is still required in three ports.

In general, the skippers' interviews took about 50 to 60 minutes, and the deck hands' interviews about 20 minutes. Interviews with wives typically lasted about 30 minutes.

4. RESPONSE

As mentioned above some mopping up is still necessary and it is difficult at this time to estimate the present response rate from crew. It can be said however that the response rate from both skippers and their wives is in excess of 90%. Only two skippers have refused to be interviewed and one resulted mainly from language difficulties. One wife and two deck hands also refused. One of the refusing deck hands had only been in the industry for a matter of weeks.

5. CODING

All skippers' and deck hands' questionnaires have been coded and the data punched. Computer files are currently in the University's DEC-10 computer and will be edited during the week commencing 9 October. It is anticipated that one-way tabulations will be available within 10 days. Once "clean" data files have been achieved the identification numbers associated with each fisherman or wife will be "scrambled" on the computer so that it will not be possible to identify any one person's answers.

6. FUTURE WORK

It is intended that non-respondents will be followed up in November. The mail questionnaires, which were inserted into the skippers' questionnaires, are continuing to come in, and reminder letters have been despatched. The mail survey of businesses will be conducted in October.

Initial cross-tabulations of variables from skippers' and deck hands' questionnaires will form the basis of the third progress report to be issued in November, and it is intended to hold discussions with AFIC and the representatives of the ports on these data.

Interpretation of data will continue throughout November and

December. It is intended to hold public meetings in each port in December or January to present to the fishermen the results of the survey and to receive feed-back from them on the issues thus raised.

Finally, CASSR is making a television film on the project covering the background to the study, methods of data collection and the results and recommendations. Video taping has been conducted in each port and several key people in the industry have been interviewed.

TABLE 1: METHODOLOGY

Frame	Unit of Analysis	Unit or Element Sampled	Sampling Procedure	Instrument
List provided by Fisheries	Authority	Skipper/owners Owners Skippers (non-owners) Wives of skippers	Census Census Census (Proportional allocation by strata. (Equal probability within strata (with minimum 10 & maximum 1 in 3 (random selection from each port	Personal questionnaire " " " " " "
		Deck hands	Census	Personal questionnaire
Universal Business Directory	Business	Owner or Manager	Census	Mail questionnaire
Enquiry	Bank	Manager	Census	Interview
Enquiry	Processor	Owner or Manager	Judgement sample	Interview

TABLE 2: TYPE OF QUESTIONS ASKED

Problem or Characteristic Addressed	Skipper Owners	Deck hand	Wife
Copes Report Recommendations	i. Heard of & response ii. Perception of effect on family & the community iii. Support likely to give buy-back iv. Administration of buy-back v. Alternative methods of effort reduction	i. Heard of & response ii. Perception of effects of implementation on deckie	i. Heard of & response ii. Perception of effect on family & the community iii. Support of buy-back iv. Alternative methods of effort reduction v. Probability of children becoming fishermen
Perception of Problems	i. Input costs & facilities ii. Amateur fishermen iii. Effort in industry iv. Obtaining deck hands v. Industry compliance to restrictions		
Work Experience & Qualifications	i. Previous jobs & where ii. Jobs during closure iii. Schooling and qualifications	i. Previous jobs & where ii. Jobs during closure iii. Schooling and qualifications	
Previous Experience in Industry & Expectations	i. Years as deckie ii. Years as skipper iii. Ownership of boat iv. Expectations of staying	i. Years as deckie ii. Skippers ticket iii. Expectations of boat ownership iv. Expectations of staying	
Effort Distribution Over Year	i. Number of days fished (& if wholly for crays) ii. Number of hrs/day iii. Number of pots/day iv. Number of days on maintenance v. Number of days in other fishing during closure vi. What done during closure	i. Number of days fished (& if wholly for crays) ii. Work in season closure	

Problem or Characteristic Addressed	Skipper Owners	Deck hand	Wife
Past & Future Change in Technology	i. If had previous boat a) its construction b) type of hull ii. Characteristics of present boat iii. Likelihood of changing boat & possible characteristics iv. On pot economies per boat		
Economic	i. History of catch ii. Minimum catch required iii. Costs in obtaining cray catch iv. Sources of income outside of crays v. Wife's earnings	i. Catch ii. Income iii. Sources of income iv. Wife's earnings	i. Working & job type
Capital and Debt	i. Boat ownership & debt ii. House ownership & mortgage payments iii. Investments outside of boat & crayfishing	i. Likely source of capital for boat ii. Home ownership & mortgage payments	
Socio-economic involvement in region	i. Social organizations ii. Expenditure pattern iii. Use of services iv. Size of family	i. Social organizations ii. Expenditure pattern iii. Use of services iv. Size of family	i. Social organizations ii. Expenditure pattern iii. Use of services
Perceived Options if sell out & assistance needed	i. Likelihood of selling out ii. What would do iii. Where would go iv. Assistance needed	i. Options available if present boat sells out ii. Assistance, re-training	i. Effect of closure on family & community ii. Assistance necessary
Demographic Family	i. Age ii. Married iii. Dependent children iv. Where lives v. Where has lived	i. Age ii. Married iii. Dependent children iv. Where lives v. Where has lived	i. Where lives ii. Where has lived
General Industry Characteristics	i. Reaction to closure & preferred months ii. Radio contact		i. Reaction to closure & preferred months
Attitude to Family Fishing			i. To husband fishing ii. To son's future fishing

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SOCIO-ECONOMIC STUDY OF THE ROCK LOBSTER INDUSTRY IN THE SOUTHEAST OF SOUTH AUSTRALIA

- A CASSR RESEARCH PROJECT -

RESULTS OF A SURVEY OF SKIPPERS AND DECKHANDS IN THE SOUTHERN ZONE FISHERY

THIRD PROGRESS REPORT

to

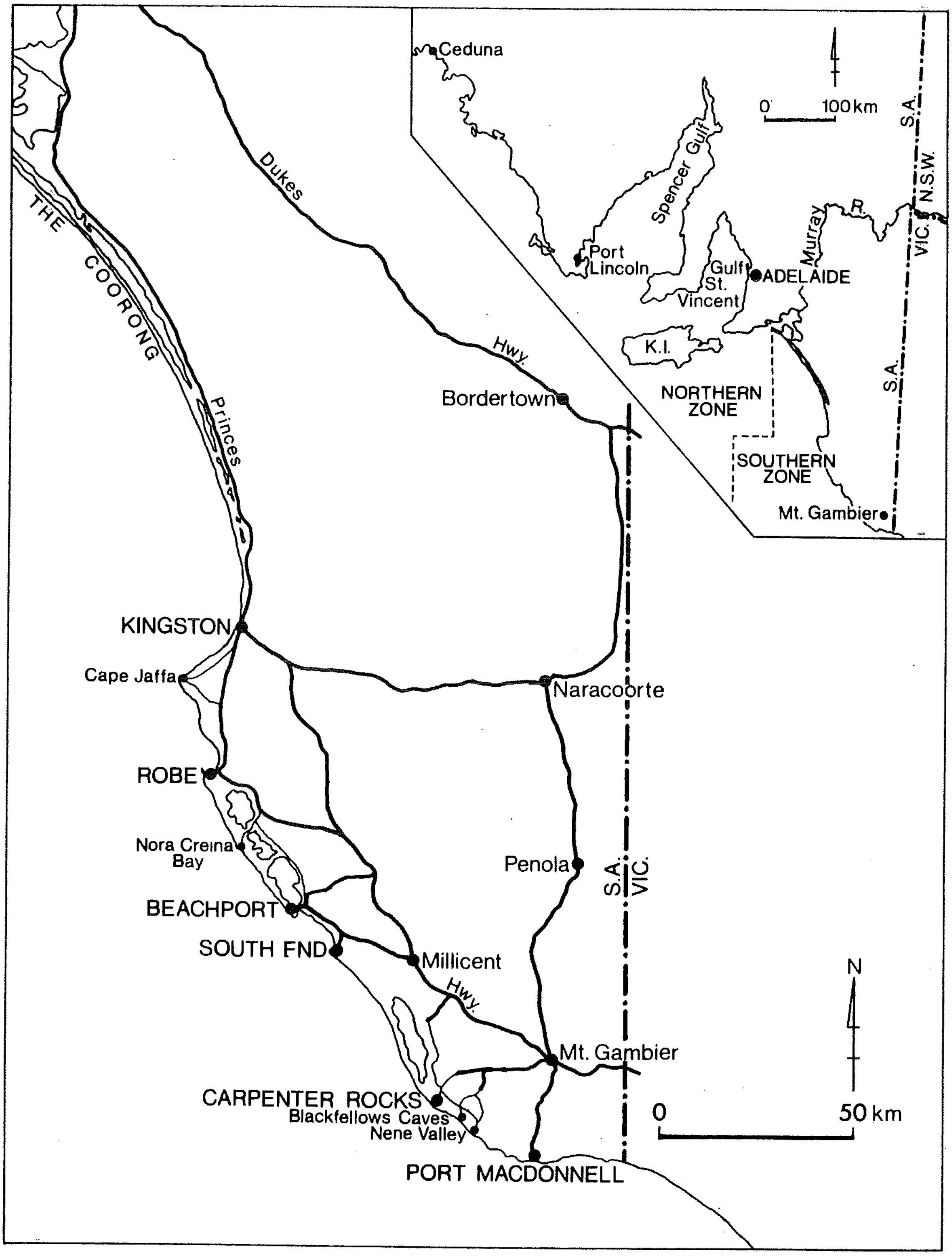
THE AUSTRALIAN FISHING INDUSTRY COUNCIL (SA BRANCH INCORPORATED)

by

E.A. Cleland, R.J. Stimson, D. Campbell & A.J. Goldsworthy

Centre for Applied Social & Survey Research (CASSR)
School of Social Sciences,
THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

January, 1980.


THE COORONG
Dukes
Hwy.
Princes
Bordertown
KINGSTON
Cape Jaffa
Naracoorte
ROBE
Nora Creina Bay
BEACHPORT
SOUTH END
Millicent
Hwy.
Penola
S.A.
VIC.
Mt. Gambier
CARPENTER ROCKS
Blackfellows Caves
Nene Valley
PORT MACDONNELL
N
0
50 km
Ceduna
0
100 km
S.A.
N.S.W.
VIC.
Spencer Gulf
Murray R.
Port Lincoln
Gulf St. Vincent
ADELAIDE
K.I.
NORTHERN ZONE
SOUTHERN ZONE
Mt. Gambier

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PREFACE

In 1979 the Australian Fishing Industry Council, S.A. Branch (AFIC) commissioned a research team from the Centre for Applied Social & Survey Research (CASSR) at The Flinders University of South Australia to conduct a major socio-economic study of the rock lobster fishery in the Southern Zone, South Australia. The study was supported by The Fishing Industry Research Trust Account, Department of Primary Industry, Canberra.

*The general objectives of the study were to collect detailed information from fishermen on their experience in the industry, their attitudes towards a range of management issues and problems confronting the industry, and their feelings towards a likely participation in a proposed effort reduction scheme through vessel buy-back. AFIC and the rock lobster fishing industry required data on these issues to be collected and analysed so that it could negotiate with the S.A. State Government on the future management of the fishery, particularly the proposals made in the 1978 Copes Report.**

Thus, the research team from CASSR was commissioned to conduct investigations for the industry and to report to the industry.

The major part of the study involved collecting detailed data from all skippers, owners and deckhands in the rock lobster fishery in the Southern Zone. Interviews were conducted in August and September, 1979, and the interest of the fishermen and their willingness to participate in the study was magnificent. This was due to a number of factors, the most important being that they realized that the industry has a number of problems regarding its future viability and that this study represented a one-time opportunity for them to have a say in how their industry should be managed.

Guarantees were given the fishermen that the research team would come back to them to discuss the results of the data collected and the implications it has for the future management of the industry. In this way some feedback could be gained from the industry before the research team wrote its final report and recommendations for AFIC.

The data collected from the interviews with skippers, owners and deckhands is given in this paper. It is a summary of the main results of the surveys and is intended as a descriptive, non-technical paper for the fishermen and others involved in the industry. Data is given for the industry as a whole and for each of the six ports as well where relevant. It is one of a number of progress reports that have come out of the study.

R.J. Stimson,
Director, CASSR.

** The S.A. Department of Agriculture & Fisheries had commissioned an economic study of the S.A. rock lobster industry to be conducted by Professor P. Copes, a noted fisheries economist at the Simon Fraser University, Vancouver, British Columbia, Canada. His report Resource Management for the Rock Lobster Fisheries of South Australia was issued by the Department in March, 1978.*

1. SURVEY RESPONSE

An attempt was made to interview every skipper and owner of a cray fishing boat and all deckhands so that a full census of the industry was achieved. While not everyone was interviewed - a few refused, some were absent from their ports during the months of the study and some boats were out of the industry - the response rates were very high.

Port	Target No. of boats N	No. of Interviews Completed					% boats covered where at least skipper was interviewed
		Skipper-Owners N	Joint Skipper-Owners N	Skipper Non-Owners N	Owners N	Deckies N	
Kingston-Cape Jaffa	34	32	-	1	-	22	97%
Robe-Nora Creina	47	41	-	5	2	40	98%
Beachport	24	22	-	1	-	19	96%
Southend	40	36	-	2	1	37	95%
Carpenter Rocks-Nene Valley - Blackfellows Caves	36	20	-	14	-	12	94%
Port MacDonnell	73	61	4	5	8	38	97%
TOTAL	254	212	4	28	11	168	96%

Number of target boats based on list supplied by South Australian Department of Agriculture & Fisheries.

2. SKIPPERS' TIME IN THE INDUSTRY AND THEIR BACKGROUND

2.1 Experience in the Fishery

The big majority (66%) of skippers had had a full-time job prior to becoming a cray fisherman, but there were considerable variations between ports: 77% Kingston; 74% Beachport; 69% Southend; 67% Port MacDonnell; 65% Carpenter Rocks; 52% Robe. Of these, only 25% had had a job that required professional or trade qualifications.

Most fishermen (61%) came into the industry between 1954 and 1968, with only 13% having started before 1954. Another 13% came in between 1969 and 1971, and the remaining 13% after 1971. There are big differences between the ports in the proportion of skippers that are entrants to the industry since 1969: Kingston 42%; Beachport and Carpenter Rocks 30%; Robe 26%; Port MacDonnell 22%; Southend 15%. Since entering the fishery, 75% of skippers had fished every season, and those who had not usually had only missed 1 or 2 seasons. Overall 50% of fishermen had been skippers for less than 10 years, but this was much higher in Kingston and Beachport (61%) and considerably less in Southend (38%). Overall 19% of skippers had not served any time as a deckie before becoming a skipper, but in Southend this was so for 31% whereas it was only 4% in Robe. Generally this "apprenticeship" as a deckie was less than 5 years, although a total of 25 skippers had spent over 10 years as a deckie.

Obviously skippers see cray fishing as their life-time occupation having entered the fishery, and only 15% indicated that they did not see themselves fishing until they retire. However, in Robe, Port MacDonnell and Carpenter Rocks, over 40% of skippers had given some thought at some stage to getting out of the industry, but this was only between 20 & 30% in the other ports.

2.2 Biographical Details of Skippers

Relatively few skippers were either very young (5% under 25 years of age) or very old (3% 60 years or older). There were quite a few differences between the ports in the age structure of skippers.

	Kingston	Robe	B/port	Sth[d]	C.Rocks	Pt.Mac.	S.Zone
Under 30 yrs.	20%	25%	30%	15%	21%	25%	23%
30-45	45%	38%	36%	36%	53%	51%	44%
45-60	35%	47%	34%	46%	17%	20%	30%
60 & over	0%	0%	0%	3%	9%	4%	3%

Robe and Southend tended to have rather older fishermen than the other ports, but Robe, along with Beachport and Port MacDonnell, also had a greater proportion of the under 30 age group. The data clearly indicate that very few skippers in the industry are nearing retirement age, and even in Robe and Southend only about one-fifth of skippers are in their 50's or above. In the other ports, the skippers tend to be young with two or more decades of working life ahead of them.

The vast majority (88%) of skippers are married, although in Robe and Beachport 20% of them are single. Thus, the typical skipper is a married man, usually with two children, although there is a little variation between the ports with those in Kingston, Southend, Carpenter Rocks and Port MacDonnell being more likely to have larger families with dependent children.

Married skippers usually had non-working wives, with only 26% having a full-time job and 7% a part-time job. There were big differences between ports. In Robe, 62% of wives worked, and in Kingston 44% had a job. It was Beachport and Southend where very few wives (15%) had jobs. Obviously these data reflect the differences in the size of ports and job opportunities available, and Robe and Kingston have considerable tourist-related employment opportunities.

Where wives worked they were mainly employed locally in non-fishing-related jobs, although in Southend and Port MacDonnell, 1/3 to ½ of working wives were employed in fishing-related work, mostly processing. In Carpenter Rocks 42% and in Beachport 33% of working wives were employed elsewhere, mainly Mt. Gambier or Millicent.

In all 52% of skippers fully owned their homes, and another 27% were buying them. These are high figures, but there were big differences between the ports in the rate of owner-occupancy of houses from a top of 95% in Southend to a low of 56% in Carpenter Rocks. Robe was the only port with a high incidence of renting of homes (21%). In Kingston, Robe and Port MacDonnell 30 to 40% of fishermen are paying off their houses, but the general level of monthly repayment was relatively low, 60% paying less than $100 per month and only 16% over $200.

A majority of fishermen were born in the Southeast (56%), and 18% were born in the port they fish from. There were, however, big differences between the ports, especially in the proportion of skippers who were born in Adelaide or elsewhere outside the Southeast, this being least in Carpenter

Where born	Kingston	Robe	B/port	Sth^{d}.	C.Rocks	Pt.Mac.	S. Zone
Local port	26%	19%	13%	0%	12%	29%	18%
Other S.E.	13%	27%	22%	49%	62%	43%	38%
Adelaide	19%	27%	22%	15%	6%	3%	14%
Other	42%	27%	43%	36%	20%	25%	30%

Rocks and Port MacDonnell. Only in Beachport and Southend were a significant proportion of skippers (25%) born overseas, as these ports have quite a few fishermen of Italian origin.

Consistent with the time skippers have been in the industry, very few had lived in their home port for 5 years or less, with over 50% having lived there for 20 or more years. Beachport, Southend and Kingston tended to have relatively more skippers who had lived in the home ports for shorter periods of time.

Fishermen are not likely to have moved about very much with only 25% having lived in a place other than their home port since 1968. Carpenter Rocks fishermen were the least mobile.

About one-half of the skippers had left school by the age of 15, and only 10% had remained at school until 17 years of age, although at Robe 20% of skippers had done so.

2.3 Family Connections with Fishing

Nearly half the skippers had fathers who either are or had been fishermen, and this was highest at Kingston (60%) and lowest at Port MacDonnell (37%). The strong link with family in fishing is further shown with 60% of skippers having a brother who is or has been in fishing (70% in Carpenter Rocks and 50% in Kingston). Slightly less than one-third had a son who is a fisherman. This was 50% at Beachport and 17% at Southend. Just over one-third of skippers had a brother-in-law in fishing. At Carpenter Rocks this was 50% and was as low as 22% at Kingston. Over half the skippers said they had a son whom they hoped would become a fisherman (70% in Beachport, 37% in Southend).

3. OWNERSHIP OF THE FLEET

The majority (57%) of fishermen operate as a family-partnership, usually with their wife. One-third were sole operators. Two boats were operated as a partnership not involving members of the same family. Company arrangements of ownership are not common with two notable exceptions. At Carpenter Rocks, H. Stanke & Sons Pty. Ltd. own and operate 17 boats, and at Southend Galli & Fabris Bros. own and operate 7 boats.

The incidence of absentee or non-skipper owners of boats is low. Of the respondents to the survey there were only nine boats involved, in a couple of cases one person owning two boats. There were, however, a total of 28 (11%) of boats that were skippered by non-owners, the majority of these being skippers of company boats at Carpenter Rocks.

Of the respondents who were owner-operators of boats, 56% now owed nothing on them. This percentage varied from 50% in Robe to 68% in Beachport. Thus, 44% of boats operated by owners were involved in paying off loans. A total of 96 boats were involved.

Sources of finance for loans for those fishermen paying off their boats were local banks (89%). Only 5 had obtained finance from family sources. Over half of them had been paying off loans for 3 years or more, while one-quarter had only had their loans for a year or less. Estimations of the number of years it would take them to fully pay off loans indicated that 37% would take 5 or more years (35 boats), 33% would take 3 or 4 years (31 boats), and 30% would take less than three years (28 boats). It would appear that at Robe a greater proportion of people paying off loans on their boat and had relatively longer terms to complete these payments.

The amount of outstanding loans repayments indicates that 22 boats owed greater than \$20,000, 31 owed \$10,000 to \$20,000, 24 owed \$5,000 to \$10,000, and 17 owed under \$5,000. Again Robe had the relatively greatest level of indebtedness on boats.

Relatively few respondents who had loans (16%) indicated that they had had any difficulty obtaining them, although this was rather greater at Robe (23%) and Kingston (21%).

The survey data gave an estimated gross value of the fleet (boats plus authorities as valued at current market prices by boat owners) at \$10.15 million.

The non-owner skippers of boats could be expected to have a desire to own their own boat at some time in the future. Of these 28 skippers, 17 of them intended to do so, and 4 were currently trying to purchase a boat, and 7 said they hoped to get one within 2 years. Only 4 of them said they were experiencing or expected to experience difficulty trying to arrange finance, and all except one said that they would get it from a bank. The intending buyers of boats generally expected to get a boat from which they would fish well less than 70 pots, and about half said they expected to pay over \$35,000 for a boat including authorities.

4. WHAT SKIPPERS KNOW AND THINK OF THE COPES REPORT

Fishermen were asked if they had read the Copes Report, and a positive answer was recorded if they indicated that they had even looked at several pages of it. It was most likely that all they would have seen was an abridged version of the original report (selected page extracts) that was made available to fishermen by the S.A. Department of Agriculture and Fisheries. Over 78% of skippers in the Southern Zone claimed to have read the Copes Report, the proportion varying from 61% in Kingston to 85% in Carpenter Rocks. (A positive answer was recorded if a fishermen said he had "tried" to read it).

Over 50% of the fishermen who had read or discussed the Copes Report could see some good and some bad points in it, but one-third were totally opposed to the report and its recommendations. Only 9% wholly supported the proposals. There were big differences of opinion between the ports.

************************************ C R O S S T A B U L A T I O N O F ************************************
V10 OPINION OF REPORT by V3 PORT Page 1 of 1

V10 (Count / Col %)	V3: KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. FOR IT	3 14.3	11 26.8	1 5.3	0 0.0	3 10.3	1 1.8	19 9.4
2. SOME GOOD-SOME F	16 76.2	25 61.0	6 31.6	18 50.0	12 41.4	29 51.8	106 52.5
3. TOTALLY AGAINST	2 9.5	4 9.8	9 47.4	16 44.4	13 44.8	23 41.1	67 33.2
4. NO OPINION	0 0.0	1 2.4	3 15.8	2 5.6	1 3.4	3 5.4	10 5.0
Column Total	21 10.4	41 20.3	19 9.4	36 17.8	29 14.4	56 27.7	202 100.0

Number of missing observations = 45

It was not uncommon for fishermen to describe the report as a "Socialist" or even a "Communist" document.

In spite of apparent opposition to the Copes Report, close to 90% of skippers agreed with Copes' proposition that there were too many boats operating in the Southern Zone. Typically comments of those who diagreed with the proposition related more to the rights of individuals to fish than to the economic viability of the fishery.

5. ASSESSMENT OF PROBLEMS FACING FISHERMEN IN THE PORTS

Respondents were presented with a list of 13 problems it is claimed they are facing in the ports. They were asked to indicate whether, in their port, each of these was a major problem, a minor problem or no problem. The answers given are represented in the attached diagrams and tables. For each of the 13 problems, these diagrams indicate for the Southern Zone as a whole and for each of the six ports separately, the percentage of fishermen who saw them as a major, minor, or no problem.

Of the 13 problems that fishermen may be facing, only four were seen as being a major problem by more than half the respondents in the whole Southern Zone. These were fuel costs, gear costs, too many boats fishing and bait costs. Three potential problems were not seen as such by more than half the fishermen. These were recruiting deckhands, getting extra pots, and winter closure. There were considerable variations between the ports in the perception of problems facing fishermen.

Although only one-third of fishermen observed prices received from processors as a major problem, only in Carpenter Rocks did the majority see it as no problem. Robe and Port MacDonnell fishermen were most inclined to see it as a problem.

In Port MacDonnell 58% of fishermen saw amateurs as presenting no problem, which is surprising since this is the most intensively fished port of the coast and is close to the major population centres.

Gear costs were a major problem in all ports.

Obtaining extra pots (if fishermen were not operating their quota) was generally no problem, except that Robe and Carpenter Rocks fishermen were more inclined to see difficulties in this regard than in other ports.

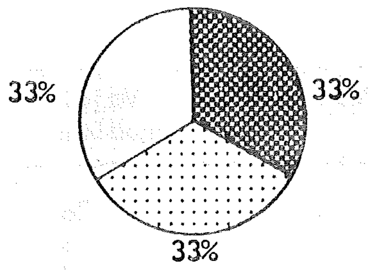
Winter closure was only seen as a problem at Robe and Southend where over 50% considered it to be so, but at Port MacDonnell, Beachport and Kingston over half the fishermen saw it as no problem.

Recruiting deckhands was no real problem in any port. At Robe 44% thought it was, probably due to it being the second largest port and having a poor location relative to the main population centres.

Too many boats fishing from the port was a major problem, particularly at Robe (81%), but less so at Carpenter Rocks (50%) and Beachport (52%). Port MacDonnell, the largest port and the most intensively fished section of the Southern Zone, had a big majority seeing this as a problem.

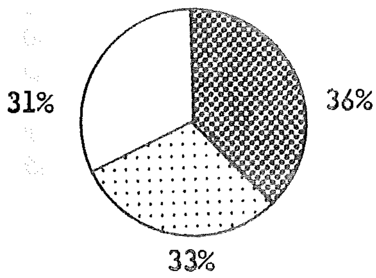
Over 50% of fishermen in every port considered the taking of undersize crays as at least a minor problem. There is, however, a considerable increase in the proportion who consider this to be a major problem as we move south along the coast, from 19% at Kingston to 45 to 47% at Carpenter Rocks and Port MacDonnell.

Fuel costs are a universal major problem.



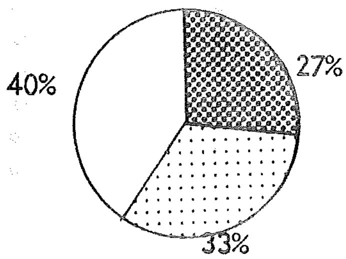
Percentage Response by Port

Processors Price



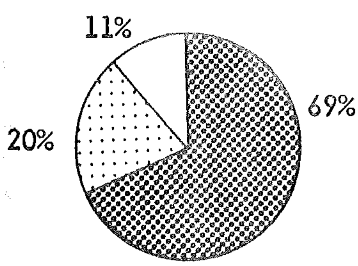
Port	Major Problem	Minor Problem	No Problem
1	45	21	33
2	43	38	19
3	35	30	35
4	33	36	31
5	26	15	59
6	34	43	23

Amateurs



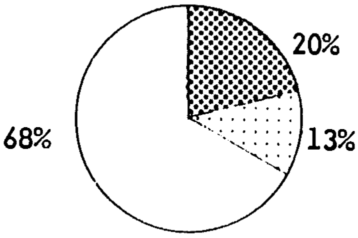
1	15	45	39
2	35	44	21
3	43	35	22
4	26	33	41
5	41	18	41
6	15	27	58

Gear Cost



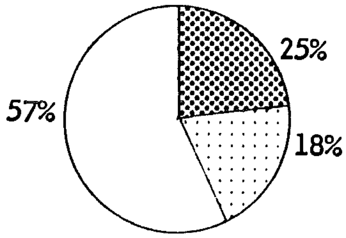
1	70	18	12
2	75	10	15
3	70	17	13
4	72	20	8
5	73	23	3
6	61	26	13

Getting Extra Pots



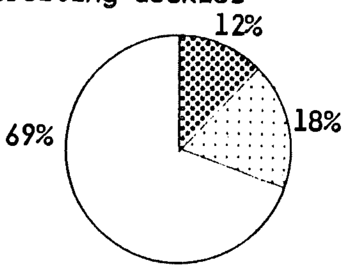
Port	Major Problem	Minor Problem	Np Problem
1	26	10	64
2	26	22	52
3	17	0	83
4	3	24	74
5	32	9	59
6	16	8	75

Winter closure



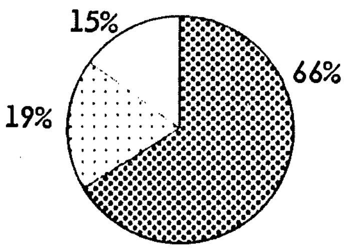
Port	Major Problem	Minor Problem	Np Problem
1	31	6	62
2	24	36	40
3	26	9	65
4	26	21	53
5	23	18	59
6	22	13	65

Recruiting deckies



Port	Major Problem	Minor Problem	Np Problem
1	10	10	79
2	15	28	57
3	9	9	82
4	8	23	69
5	15	9	76
6	13	20	66

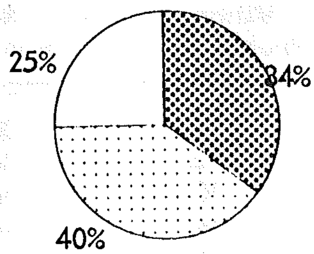
Too many boats



Port	Major Problem	Minor Problem	Np Problem
1	54	27	18
2	81	15	4
3	52	22	26
4	74	10	15
5	50	23	26
6	70	19	11

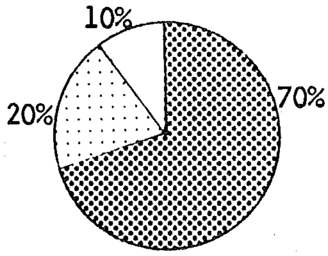
206

Undersized crays



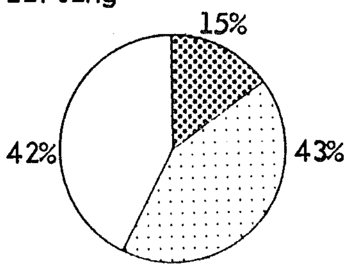
Port	Major Problem	Minor Problem	No Problem
1	19	53	28
2	19	49	32
3	30	26	43
4	32	45	24
5	47	29	23
6	48	36	16

Fuel costs



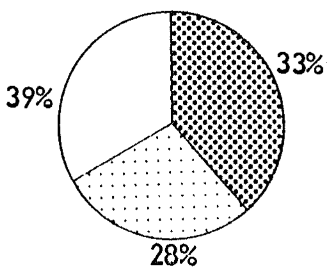
1	76	12	12
2	67	27	6
3	61	26	13
4	72	23	5
5	58	24	18
6	78	13	8

Pot lifting



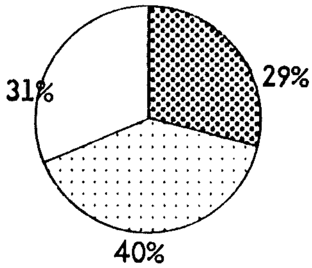
1	10	39	52
2	6	36	57
3	9	26	65
4	18	46	36
5	29	38	32
6	18	55	27

Port facilities



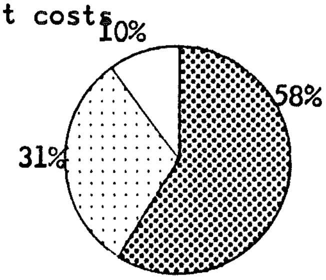
1	55	13	32
2	19	43	38
3	35	13	52
4	31	46	23
5	79	9	12
6	12	28	59

Illegal potting



Port	Major Problem	Minor Problem	No Problem
1	12	59	28
2	13	51	36
3	13	30	56
4	5	54	40
5	21	26	53
6	68	26	6

Bait costs



1	64	24	12
2	67	25	8
3	54	36	9
4	51	36	13
5	41	41	19
6	62	31	7

Pot lifting by other fishermen presented an interesting contrast In Kingston, Robe and Beachport less than half the fishermen consider it to be a problem. In the other ports, though, at least 64% consider it to be a problem of some magnitude.

In only two of the ports are port facilities a major problem. These are Kingston and Carpenter Rocks. It is a problem at Beachport and Southend, but no problem at Robe and Port MacDonnell.

There is some concern with illegal over-potting in the Southern Zone. Even when those who did not respond to this question are taken into account, only in Beachport and Carpenter Rocks did a majority of fishermen consider it not to be a problem. Port MacDonnell was the only port in which a majority of fishermen said it was a major problem. It is interesting to compare this data with responses to another question in which fishermen were asked to indicate what percentage of pots being fished were illegal (or "blue") pots. In Port MacDonnell 54% of fishermen consider that at least 11% of pots are "blue" pots, and 65% reckoned that over-potting was a major problem. In contrast, in Carpenter Rocks only 20% of fishermen saw over-potting as a major problem and 51% saw it as no problem at all, but 47% said that at least 11% of pots were "blue".

A majority of fishermen (57%) in all ports except Carpenter Rocks (38%) considered bait costs to be a major problem.

6. FISHERMEN'S ATTITUDES TO QUESTIONS OF INTEREST TO THE INDUSTRY

Respondents to the survey were presented with a set of 25 statements relating to a wide range of issues concerning the operation and management of the industry. They were asked to indicate on a five-point scale the degree to which they agreed or disagreed with each statement.

Their responses have been summarized to give the percentage of fishermen who agreed, neither agreed nor disagreed, or disagreed with each statement. The attached bar-charts illustrate these responses. The data relate only to the whole Southern Zone and no attempt has been made at this stage to investigate port differences. The statements are grouped into a number of general issues.

6.1 Management Issues in General

It is worth noting that 82% of fishermen agree that there are too many boats fishing in the Southern Zone. When asked in the group of questions on port problems, 68% of fishermen considered too many boats was a major problem in their port, and 17% considered too many boats was a minor problem (totalling 85%).

In responding to the statement *"The top boats should be encouraged to move to another fishery"*, 46% disagreed, while 42% agreed. It would be interesting to know how fishermen interpreted this question. Did they see *"encouraged"* as meaning a financial encouragement, or did they believe it to mean contain an element of compulsion, or whatever! There was a strong disagreement with a suggested pot reduction of ten per boat, 74% being against it.

The next two statements (Nos. 4 & 5) have to do with government involvement in the fishery. In the first of these, *"The Government should not interfere in the economic management of the crayfishing industry"*, 55% agreed they should not. To the statement *"As crayfish are a common property resource some form of government intervention in the industry is necessary"*, 65% agreed that is so. As 90% of the skippers believe that some control on entry is necessary to manage the resource, why do we see 55% agreeing that government should not be involved, while 65% later say they should be involved. One possible explanation is that dealings by fishermen with the Department of Fisheries have not been very good. Another is that fishermen are philosophically opposed to government interference and management, while recognizing that the fish are a common property resource. There are obvious illogical inconsistencies that are probably related to political attitudes as much as anything else.

Limited entry is a well established fisheries management strategy. Statements 6 and 7 are to do with this. An overwhelming majority (90%) agreed that in cray fishing limited entry is necessary to manage the resource.

Sharking has always been closely associated with rock lobster industry. Lately, rock lobster fishermen have been concerned over the survival of the shark fishery, so that some fishermen have asked for controls on entry. On being asked whether controls should be established, though, only 34% agreed while 59% disagreed. Fishermen appear to see sharking as an additional source of income. Even though they may not have sharked for several years they wish to maintain that option. They are concerned then that any controls will exclude them.

Questions of interest — Statement	Agree	Neither agree nor disagree	Disagree
(Key)	33%	33%	33%
1. There are too many crayboats fishing in the Southern Zone	82%	7%	11%
2. The top boats should be encouraged to move to another fishery	42%	12%	46%
3. There should be a pot reduction of ten per boat	22%	4%	74%
4. The Government should not interfere in the economic management of the crayfishing industry	56%	12%	32%
5. As crayfish are a common property resource, some form of government intervention in the industry is necessary	65%	7%	27%
6. In crayfishing limited entry is necessary to manage the resource	90%	2%	9%
7. Sharking should be made a limited entry fishery	34%	6%	59%
8. Each port should have a designated zone in which its boats are restricted to fish	22%	5%	73%
9. Crayfishermen from other ports should not be permitted to move to this port and fish from here	35%	9%	56%
10. Fees per pot should be increased so as to cut out inefficient fishermen	10%	3%	87%

Statements 8 and 9 are concerned with local feelings against outsiders moving into their ports and to fishing in waters out from their ports. In both cases a majority of skippers disagreed against placing restrictions on movement. Appreciably more fishermen agreed (35%) that fishermen should not move to their port than were willing to see fishing zones established off each port (22%). Talking with fishermen there does appear to be some social pressure against newcomers into a port and against outsiders fishing in their area. Just how much of this occurs is unknown.

6.2 Charges and Regulations

Fishermen are against instituting fees per pot (Statement 10) even where such increases may exclude inefficient fishermen. Only 10% thought it was a good idea, while 87% disagreed. It is usual for people to oppose increases in fees and charges of any kind.

Although survey requirements involve a fair amount of expense for fishermen (Statement 11), only 21% considered them as being too strict, 67% seeing them as adequate. At the same time 67% of the skippers consider present radio communications as being satisfactory (Statement 12). The question still remains, however, whether any of the 67% would be willing to support an upgrading in radio communications. Further, of the 29% who disagreed with the statement some may have been dissatisfied with the cost of the present system, not the quality of service achieved.

Considering some of the responses received during the port panels carried out prior to the survey, it was interesting to see that 55% of fishermen agree that *"Port charges should meet the costs of providing port services"* and that only 37% disagree (Statement 13). There was concern as to what was the cost of a service when other groups, such as tourists, also may use facilities such as a jetty.

6.3 Dealings with Authorities

In the popularity polls (Statements 14 & 15), the Department of Marine and Harbours wins out over the Department of Fisheries - 74% to 67%. Considering the response to the question that *"The Government should not interfere in the economic management of the industry"* discussed above, it is surprising that the Department of Fisheries did as well as it did.

6.4 Policing and Penalties

There were four questions relating to the policing of professional fishermen and amateurs (Statements 16 - 19). A large proportion of fishermen agreed that there should be more policing of undersized crays (86%) and that fines should be substantially increased (93%). They strongly disagreed (89%) that the taking of berried females has little effect on future cray yields. 52% disagree with the statement that the use of pots by amateurs has little effect on yields.

6.5 Other Issues, Including Copes

A series of statements relating to other issues were asked, including buy-back. Although it was a question being most relevant in Kingston and Robe, 69% of all fishermen agreed that *"They should be permitted to fish the Murray River for carp to use as bait"* (Statement 20).

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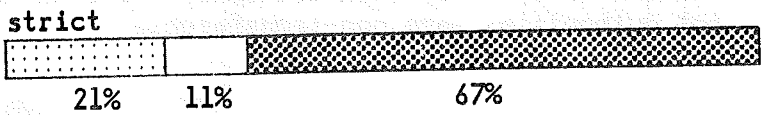
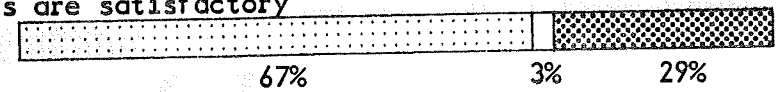
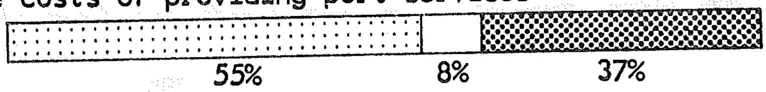
11. Survey requirements are too strict



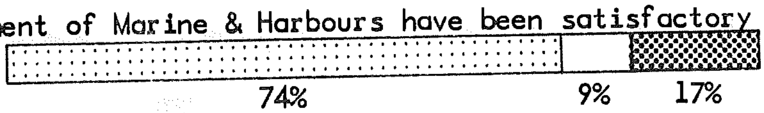
12. Present radio communications are satisfactory



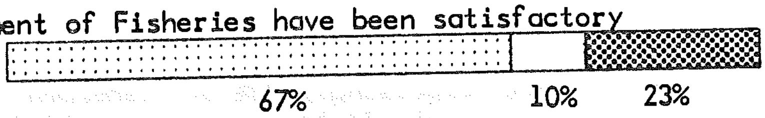
13. Port charges should meet the costs of providing port services



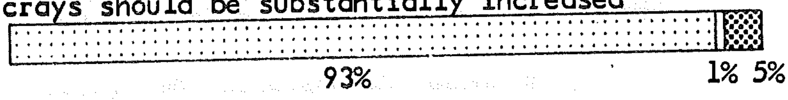
14. My dealings with the Department of Marine & Harbours have been satisfactory



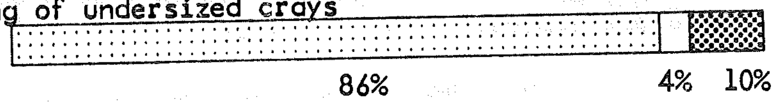
15. My dealings with the Department of Fisheries have been satisfactory



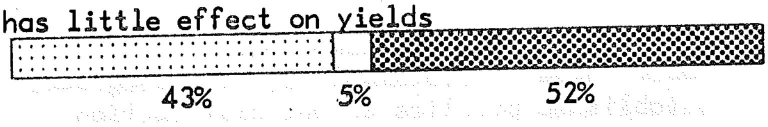
16. Fines for taking undersized crays should be substantially increased



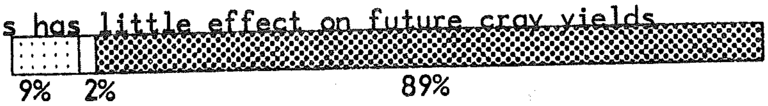
17. There should be more policing of undersized crays



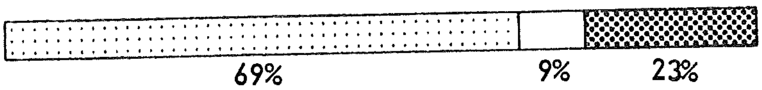
18. The use of pots by amateurs has little effect on yields



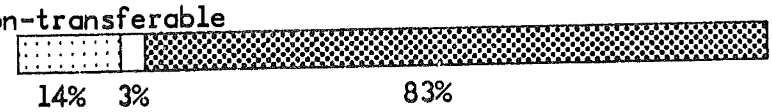
19. The taking of berried females has little effect on future cray yields



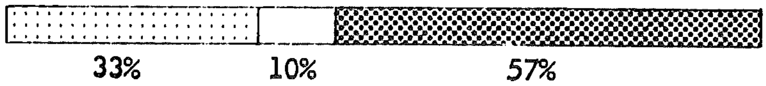
20. Crayfishermen should be permitted to fish the Murray River for carp to use as bait



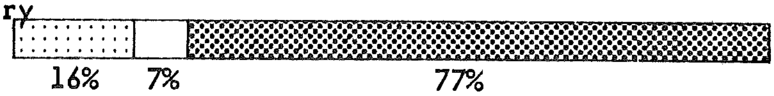
21. Pot authorities should be non-transferable



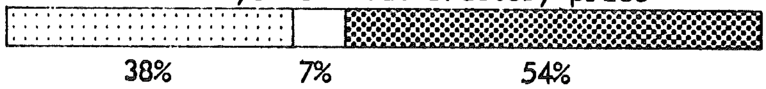
22. If established, a buy-back authority would be more effective if pot authorities were non-transferable



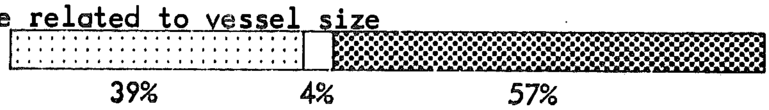
23. Deckies should have pot allowances made available to them according to time spent in the industry



24. The price received from processors for crays is a satisfactory price



25. Pot allocation should not be related to vessel size



Not surprisingly 83% of fishermen disagreed with Statement 21, *"Pot authorities should be non-transferable"*. The number of fishermen disagreeing with Statement 22, *"If established, a buy-back authority would be more effective if pot authorities were non-transferable"*, was 57%.

Of those who answered the question concerning the redistribution of pots to deckies according to time spent in the industry (Statement 23), 77% disagreed. This question comes from a suggestion in the Copes' Report and pre-supposes some knowledge of that particular suggestion.

Only 38% agreed with the Statement 24 that *"The price received from processors is a satisfactory price"*, 54% disagreeing.

On the question that *"Pot allocation should not be related to vessel size"*, (Statement 25) 57% disagreed, thus a majority supported the established practice of pot distribution.

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7. UPGRADING OF BOATS & TRADING IN AUTHORITIES

7.1 The Fishing Fleet

Most of the fishing fleet (57%) were conventional hull boats, but over 40% were planing hull craft. Variations were great between the ports, with Kingston having 71% planing hulls and Southend, Robe and Port MacDonnell having only 30%.

Two-fifths of the boats were in the 9 to 12 metre size class, 30% were 6 to 9 metres, and 24% over 12 metres in size. Only 9 (4%) boats were less than 6 metres. There were quite substantial differences between the six ports.

SKIPPERS RESPONSES - CROSSTABULATED BY PORTS 17-Jan-80 Page 26
File NONAME (Creation date = 8-Jan-80)

C R O S S T A B U L A T I O N O F V123 SIZE OF BOAT by V3 PORT Page 1 of 1

V123 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 6.0 ME	1 3.2	1 2.1	0 0.0	1 2.6	2 5.9	4 5.6	9 3.6
2. 6.0-9.0 METRES	17 54.8	10 20.8	9 39.1	9 23.1	10 29.4	19 26.4	74 30.0
3. 9.1-12.0 METRES	10 32.3	20 41.7	8 34.8	17 43.6	10 29.4	39 54.2	104 42.1
4. OVER 12.0 METRES	3 9.7	17 35.4	6 26.1	12 30.8	12 35.3	10 13.9	60 24.3
Column Total	31 12.6	48 19.4	23 9.3	39 15.8	34 13.8	72 29.1	247 100.0

Most boats (68% of the fleet) were licensed to fish 60 to 80 pots. Only 6% of boats were licensed to fish less than 40 pots, while a further 9% had 40 to 49 authorities and 13 boats had 50 to 59 authorities. Only 13% of boats were licensed to fish over 80 pots.

Most boats (75%) fished with a skipper plus one deckhand, and only 13 boats fished with 2 deckies, these being in the main boats that fished for shark either exclusively or in addition to crays. One-fifth of the boats were usually operated by a skipper alone, and this was more usual in Port MacDonnell, Kingston and Carpenter Rocks.

************************************ C R O S S T A B U L A T I O N O F ************************************
V121 LICENSED POTS by V3 PORT
** Page 1 of 1

V121 \ V3 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 40	1 3.2	1 2.1	1 4.3	1 2.6	4 11.8	6 8.3	14 5.7
2. 40-49	6 19.4	2 4.2	4 17.4	1 2.6	3 8.8	5 6.9	21 8.5
3. 50-59	0 0.0	1 2.1	1 4.3	0 0.0	2 5.9	9 12.5	13 5.3
4. 60-69	16 51.6	20 41.7	8 34.8	11 28.2	10 29.4	17 23.6	82 33.2
5. 70-79	6 19.4	20 41.7	5 21.7	17 43.6	7 20.6	30 41.7	85 34.4
6. 80-89	0 0.0	3 6.3	4 17.4	8 20.5	8 23.5	4 5.6	27 10.9
7. 90-99	2 6.5	1 2.1	0 0.0	1 2.6	0 0.0	1 1.4	5 2.0
Column Total	31 12.6	48 19.4	23 9.3	39 15.8	34 13.8	72 29.1	247 100.0

7.2 Upgrading of Boats

Almost one-third of the owners had changed their boat in the past three years - 43% in Southend and 18% in Carpenter Rocks - involving a total of 76 licences. Upgrading did not always mean changing the boat - sometimes it involved a new engine or increasing the length of an existing boat. Where boat changes were involved in 60% of cases the change was from a smaller to a larger boat, 12 had changed to a boat of approximately the same size, and a further 12 had changed to a smaller boat. Thus, upgrading the size of boat was most common. Over half of those who had changed boats had moved from a conventional to a planing hull boat.

Significantly 44 skippers indicated that they had plans to upgrade their present boat. These were mainly from Robe (11) and Port MacDonnell (14). Of these, just over half claimed they were looking for a conventional hull boat. A total of 20 fishermen indicated that their boats were currently on the market, again these being mainly in Port MacDonnell and Robe.

7.3 Trading in Pot Authorities

Relatively few boats had had additional pot authorities purchased in the past year. Of the 28 fishermen that had, it was generally a few pots to bring them up to the full limit permitted by the licence, often as a result of upgrading their boat, but there were 12 boats where over 15 additional pot authorities had been purchased.

Most commonly the price paid for additional pot authorities was $100 to $150 (54%), with 46% paying over this price.

While relatively few fishermen were looking to purchase additional pot authorities, it was generally considered that $100 to $150 was the amount people would be willing to pay per pot. However, of the 129 skippers who answered the question, 20% said that if they could purchase additional pot authorities that they would be willing to pay over $200 per pot. It would seem that fishermen in Beachport, Kingston and Robe are willing to consider higher prices than those in other ports.

8. FISHING ACTIVITIES AND OPERATOR SATISFACTION WITH PERFORMANCE

8.1 Present Modes of Operation of the Fleet

Copes argued that to be economically viable a fisherman would need to work 70 pots. Over one-third of the fishermen interviewed (37%) believed that a total of less than 70 pots was ideal from their point of view and sixty percent actually used less than this number.

Most ports were fairly similar with respect to the number of licenced pots per boat. The overall average was that 53% of boats were licensed to work less than 70 pots. Exceptions were Kingston where three-quarters of the boats were licensed to operate with less than 70 pots and Southend where only one-third of the boats had less than seventy.

It was interesting to note that a total of fourteen fishermen were licensed to use less than 40 pots. Of these, ten operated out of the area from Carpenter Rocks to Port MacDonnell.

************************************ C R O S S T A B U L A T I O N O F ************************************
V121 LICENSED POTS by V3 PORT
Page 1 of 1

V121 (Count / Col %)	V3: KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 40	1 3.2	1 2.1	1 4.3	1 2.6	4 11.8	6 8.3	14 5.7
2. 40-49	6 19.4	2 4.2	4 17.4	1 2.6	3 8.8	5 6.9	21 8.5
3. 50-59	0 0.0	1 2.1	1 4.3	0 0.0	2 5.9	9 12.5	13 5.3
4. 60-69	16 51.6	20 41.7	8 34.8	11 28.2	10 29.4	17 23.6	82 33.2
5. 70-79	6 19.4	20 41.7	5 21.7	17 43.6	7 20.6	30 41.7	85 34.4
6. 80-89	0 0.0	3 6.3	4 17.4	8 20.5	8 23.5	4 5.6	27 10.9
7. 90-99	2 6.5	1 2.1	0 0.0	1 2.6	0 0.0	1 1.4	5 2.0
Column Total	31 12.6	48 19.4	23 9.3	39 15.8	34 13.8	72 29.1	247 100.0

There were considerable variations between ports on what was considered to be an ideal number of pots. The results in relation to Copes' recommendation of 70 pots is shown in the table below.

*P 40

CROSSTABULATION OF V122 IDEAL POTS by V3 PORT — Page 1 of 1

V122 (Count / Col %)	V3 KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 40	0 0.0	1 2.2	0 0.0	1 2.6	1 2.9	2 2.9	5 2.1
2. 40-49	2 6.5	2 4.3	1 4.3	1 2.6	4 11.8	4 5.7	14 5.8
3. 50-59	4 12.9	1 2.2	3 13.0	0 0.0	1 2.9	5 7.1	14 5.8
4. 60-69	11 35.5	15 32.6	7 30.4	10 26.3	4 11.8	9 12.9	56 23.1
5. 70-79	11 35.5	10 21.7	6 26.1	15 39.5	4 11.8	26 37.1	72 29.8
6. 80-89	1 3.2	5 10.9	5 21.7	4 10.5	9 26.5	19 27.1	43 17.8
7. 90-99	2 6.5	0 0.0	0 0.0	1 2.6	1 2.9	2 2.9	6 2.5
8. 100-109	0 0.0	9 19.6	1 4.3	4 10.5	4 11.8	2 2.9	20 8.3
9. 110 & OVER	0 0.0	3 6.5	0 0.0	2 5.3	6 17.6	1 1.4	12 5.0
Column Total	31 12.8	46 19.0	23 9.5	38 15.7	34 14.0	70 28.9	242 100.0

Over 80% of fishermen in the Southern Zone returned to their home ports daily. A total of seven "camped out" exclusively, all of these came from Kingston and Robe and most fished exclusively for shark. The remainder (15%) worked some combination of "camping" and "cut lunch" fishing. This combination was much more popular in Robe and Southend and particularly among those who combined sharking with crayfishing.

Fishermen were asked whether in 1978-79 they fished exclusively for crayfish or shark or some combination of these with the following results.

CROSSTABULATION OF V73 1978-79-FISHED FOR by V3 PORT — Page 1 of 1

V73 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. CRAYS ONLY	26 83.9	33 76.7	15 71.4	30 76.9	23 69.7	50 75.8	177 76.0
2. CRAY&NON-SHARK F	1 3.2	0 0.0	0 0.0	0 0.0	1 3.0	5 7.6	7 3.0
3. CRAY & SHARK	3 9.7	6 14.0	6 28.6	8 20.5	9 27.3	8 12.1	40 17.2
4. CRAY&SHARK&OTHER	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	2 3.0	2 0.9
5. SHARK ONLY	1 3.2	4 9.3	0 0.0	1 2.6	0 0.0	1 1.5	7 3.0
Column Total	31 13.3	43 18.5	21 9.0	39 16.7	33 14.2	66 28.3	233 100.0

Number of missing observations = 14

It should be noted that the number fishing exclusively for shark may be underestimated as it is believed that some at least of those fishermen who could not be contacted were sharking out of Port Adelaide during the period of the survey.

All respondents were asked how many days they fished during 1978-79 and how many hours, on average, they worked each day. The errors in memory were probably accounted for by the broad category boundaries that were used for the numbers of days fished. It is likely however that the "average" hours worked relates more to later in the season rather than early in the season when many are fishing close in - and are home much earlier. Answers to these questions tabulated by ports are summarized in the tables below.

CROSSTABULATION OF V74 1978-79-DAYS FISHED by V3 PORT — Page 1 of 1

V74 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. UP TO & INC. 100	3 10.7	6 16.2	6 30.0	4 11.1	2 6.3	4 6.6	25 11.7
2. 100-135	6 21.4	9 24.3	4 20.0	14 38.9	17 53.1	12 19.7	62 29.0
3. 136-150	7 25.0	9 24.3	6 30.0	8 22.2	9 28.1	21 34.4	60 28.0
4. 151-199	8 28.6	7 18.9	3 15.0	7 19.4	[illegible] [illegible].4	17 27.9	45 21.0
5. 200 DAYS & OVER	4 14.3	6 16.2	1 5.0	3 8.3	1 3.1	7 11.5	22 10.3
Column Total	28 13.1	37 17.3	20 9.3	36 16.8	32 15.0	61 28.5	214 100.0

Number of missing observations = 33

************************************ C R O S S T A B U L A T I O N O F ************************************
V75 1978-79-AV. HOURS PER DAY FISHED by V3 PORT
** Page 1 of 1

V75 (Count / Col %) \ V3	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 6	0 0.0	1 2.5	1 4.8	0 0.0	7 21.9	7 11.3	16 7.2
2. 6-7	6 20.0	5 12.5	2 9.5	5 13.2	11 34.4	10 16.1	39 17.5
3. 8-9	10 33.3	13 32.5	6 28.6	17 44.7	10 31.3	18 29.0	74 33.2
4. 10-11	10 33.3	12 30.0	8 38.1	12 31.6	2 6.3	18 29.0	62 27.8
5. 12 & OVER	4 13.3	9 22.5	4 19.0	4 10.5	2 6.3	9 14.5	32 14.3
Column Total	30 13.5	40 17.9	21 9.4	38 17.0	32 14.3	62 27.8	223 100.0

Number of missing observations = 24

8.2 Levels of Catch

Every skipper was asked how many bags of crays he caught in the 1978-79 season. Most of those interviewed in their own homes consulted records. However, many had to rely on memory and it is quite possible that some under- or overstated their catch for reasons best known to them. It is expected however, that any resulting errors are removed by the fairly broad category boundaries used in the tables below.

************************************ C R O S S T A B U L A T I O N O F ************************************
V138 CRAY BAGS CAUGHT 1978-79 by V3 PORT
** Page 1 of 1

V138 (Count / Col %) \ V3	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 100	10 35.7	4 11.1	5 26.3	6 16.2	8 24.2	16 26.7	49 23.0
2. 100-149	5 17.9	12 33.3	5 26.3	14 37.8	14 42.4	19 31.7	69 32.4
3. 150-199	4 14.3	11 30.6	2 10.5	10 27.0	10 30.3	15 25.0	52 24.4
4. 200 & OVER	9 32.1	9 25.0	7 36.8	7 18.9	1 3.0	10 16.7	43 20.2
Column Total	28 13.1	36 16.9	19 8.9	37 17.4	33 15.5	60 28.2	213 100.0

Number of missing observations = 34

Nearly one-quarter of fishermen claimed to have caught less than 100 bags of crayfish in the 1978-79 season. Of these, the majority came from Port MacDonnell (33%), with significant numbers in Kingston (20%) and Carpenter Rocks (16%). At the other end of the scale one-fifth of all fishermen (43) claimed to have caught more than 200 bags.

The following question was also asked *"What would you consider to be the minimum number of bags of crays you would need to catch in this season to make it economically worthwhile to remain a cray fisherman?"*

A summary of the answers to this question tabulated by ports is given below.

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************************************ C R O S S T A B U L A T I O N   O F **************************************
  V140      MINIMUM BAGS REQUIRED 1979:80                    by  V3         PORT
******************************************************************************************************** Page  1 of  1
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V140 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
1. LESS THAN 100	7 22.6	4 8.5	3 13.6	3 7.9	10 29.4	16 23.2	43 17.8
2. 100-149	7 22.6	10 21.3	5 22.7	9 23.7	9 26.5	31 44.9	71 29.5
3. 150-199	4 12.9	12 25.5	8 36.4	20 52.6	7 20.6	18 26.1	69 28.6
4. 200 & OVER	13 41.9	21 44.7	6 27.3	6 15.8	8 23.5	4 5.8	58 24.1
Column Total	31 12.9	47 19.5	22 9.1	38 15.8	34 14.1	69 28.6	241 100.0

Number of missing observations = 6

On the basis of the survey data, using averageing over all the fleet the total catch in the 1978-79 season was approximately 34,500 bags of 1.55 million kilograms. This represented a catch per pot in the industry of about 2.23 bags or approximately 100.2 kilograms. The gross value of the catch as delivered to the processor's door is calculated at approximately $7.05 million over the Southern Zone. These data are estimates only and for levels of catch and value are less than those made available by the Department of Agriculture & Fisheries based on the monthly catch returns of the fishermen (the figures were 1.86 million kilograms and $7.93 million value of catch). Why these figures vary when they come from the same source (i.e. the fishermen) is due to a multitude of probable causes as a result of error in both methods of data collection.

8.3 Over-Potting

Fishermen were asked to estimate the percentage of overpotting in their home ports. It is clear that the estimates made by fishermen in Port MacDonnell and Carpenter Rocks are much higher than in the other ports with 14% and 27% of fishermen believing that over 20% of the pots fished are illegal.

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************************************ C R O S S T A B U L A T I O N O F ************************************
V26 % BLUE POTS by V3 PORT
Page 1 of 1

V26	V3 Count / Col %	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
0%	0.	4 12.9	6 12.5	10 43.5	5 12.8	2 5.9	1 1.4	28 11.3
1-5%	1.	15 48.4	17 35.4	3 13.0	14 35.9	8 23.5	11 15.3	68 27.5
6-10%	2.	2 6.5	8 16.7	3 13.0	5 12.8	5 14.7	14 19.4	37 15.0
11-20%	3.	1 3.2	4 8.3	1 4.3	1 2.6	7 20.6	30 41.7	44 17.8
OVER 20%	4.	1 3.2	1 2.1	1 4.3	2 5.1	9 26.5	10 13.9	24 9.7
DK	98.	3 9.7	5 10.4	1 4.3	3 7.7	0 0.0	2 2.8	14 5.7
NO COMMENT	99.	5 16.1	7 14.6	4 17.4	9 23.1	3 8.8	4 5.6	32 13.0
	Column Total	31 12.6	48 19.4	23 9.3	39 15.8	34 13.8	72 29.1	247 100.0

8.4 Satisfaction with Past Performance

It has been argued - and fairly generally accepted - that a high proportion of fishing units are operating at an uneconomic level.

While many fishermen are willing to say that they would be "better off on wages", contrary to Copes' assertion, it does not seem that the fact that they are not receiving high returns from fishing will encourage them to sell out. To examine this impressionistic view a little more closely each fisherman's stated catch for 1978-79 was compared with the minimum catch required by him to keep him in the industry. Each fisherman could therefore be classified as having caught less than his minimum requirement (low satisfaction), caught about his minimum (middle satisfaction) or more than his minimum (high satisfaction).

The degree of satisfaction by ports is shown in the table below.

Satisfaction with 1978-79 performance:

	Kingston	Robe	B/port	Sth$^{d.}$	C.Rocks	Pt.Mac.	S. Zone
Low	4 14.3%	3 8.6%	4 22.2%	7 19.4%	4 12.1%	16 26.7%	38 18.1%
Medium	19 67.9%	20 57.1%	7 38.9%	16 44.4%	18 54.5%	36 60.0%	116 55.2%
High	5 17.9%	12 34.3%	7 38.9%	13 36.1%	11 33.3%	8 13.3%	56 26.7%
N =	28	35	18	36	33	60	210

Beachport is particularly interesting in that it has the highest percentages of both those who are Low and High on this measure of satisfaction. It will be noted that Robe has the fewest fishermen who have not reached their own necessary level of performance and Port MacDonnell has the most.

It is important to note that intention to sell to a buy-back authority does not appear to be related to this measure of satisfaction with performance as is shown in the table below.

Relationship of performance satisfaction and intention to sell:

Intention	Performance Satisfaction		
	Low	Medium	High
Definitely sell	1 3.7%	17 63%	9 33.3%
Perhaps sell	10 19.2%	29 55.8%	13 25%
Definitely not	25 21.2%	65 55.1%	28 23.7%
Don't Know	0	1 33.3%	2 66.7%

Of those fishermen who would definitely sell to a buy-back authority, 17 achieved their minimum required catch and 9 exceeded it. By far the greatest proportion of those who rated low on this satisfaction scale stated that they would definitely not sell.

9. FISHERIES MANAGEMENT ISSUES

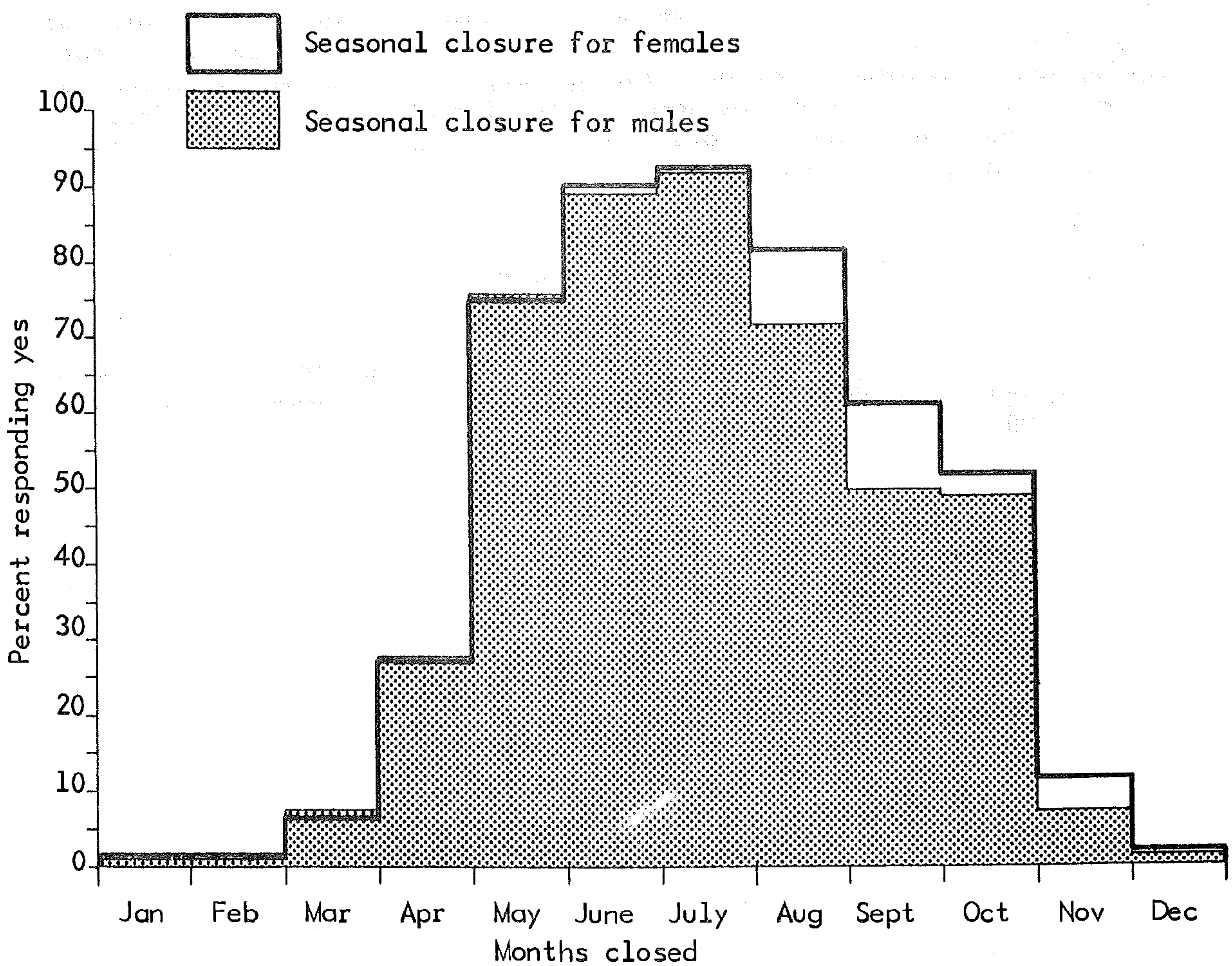
There is a large range of issues related to fisheries management covering both biologic and economic considerations. In this part of the paper we look at a number of specific management issues such as closure, effort reduction through buy-back, and other effort reduction proposals.

9.1 Closed Season

Closure is a major management issue facing the industry. Traditionally the month of October has been one of total closure, while the months of August and September have been closed for females. In 1979 the industry voluntarily introduced a total closure in the months of May, June and July. Closure is a question that has created considerable debate and is one on which fishermen have diverse views.

The 1979 winter closure was seen as being useful for biological reasons by 30% of fishermen. A further 9% saw it as being useful for economic reasons, while nearly 40% saw it as being useful for both economic and biologic reasons. Only 23% of fishermen viewed the winter closure as having no use whatever, but it must be emphasised that this relates to the situation as it was in 1979.

Skippers were asked to indicate which months they would wish to see closed for both males and females. The graphs show their responses.



It is evident that there is very strong support (over 70%) for an extended closure, for both males and females, covering the months of May, June, July and August, and that there is strong support for closure in September and October. The level of this support has important implications for extended closure as a management innovation.

Skippers in each port were "polled" to see the level of their support for closure in each month. The tables (p.31) give the number of boats where skippers support closure (for males and females) in each port. The differences are certainly apparent.

Winter closure has socio-economic implications for fishermen. On the one hand it can create economic problems related to cessation in cash-flow for fishermen and their families, and may necessitate them seeking employment in alternative jobs at other locations. On the other hand it may give the right sort of opportunity for fishermen to do the necessary boat and gear repair and maintenance and even try their hand at an alternative fishery.

Relatively few skippers (34 in all) did nothing at all during the 1979 winter closure. However, 43% spent up to a month working on their boat and gear, 23% spent 1 to 2 months on this activity, and 10% worked for over 2 months.

A total of 75 boats did some sharking during the closure, mostly on a very irregular basis, with few having fished for more than a total of 30 days. It was mainly at Port MacDonnell, Robe and Carpenter Rocks that sharking was undertaken. Another fishing activity, tuna (which commenced for the first time in 1979) was taken up by 43 boats, mainly from Port MacDonnell, but the number of days involved was small. Another 4 boats did other fishing for a few days.

Non-fishing related activities in the winter closure were infrequent, possibly reflecting to some degree the lack of employment opportunities in current times, and where other work was taken up, almost invariably it was in the local area. The number of skippers in the Southern Zone doing non-fishing work for any time at all during the winter closure was as follows: fox shooting 10; farm work 19; council work 1; labouring 13; tree planting 5; factory work 3; other 22.

Closure for Males: No. of skippers supporting by port:

	Kingston	Robe	B/port	Sth$^{d.}$	C.Rocks	Pt.Mac.	S. Zone
Jan.	0	2	0	0	0	0	2
Feb.	0	2	0	0	0	0	2
Mar.	0	6	3	4	3	0	16
Apr.	2	17	7	13	14	6	59
May	17	33	15	30	25	42	162
June	25	35	18	32	30	50	190
July	26	35	19	32	30	54	196
Aug.	20	27	17	22	25	42	153
Sept.	19	18	11	12	10	36	106
Oct.	22	9	10	11	8	44	104
Nov.	2	4	4	3	0	4	17
Dec.	0	2	0	1	0	0	3
No. of skippers in poll	27	40	22	34	30	61	214

Closure for Females: No. of skippers supporting by port:

	Kingston	Robe	B/port	Sth$^{d.}$	C.Rocks	Pt.Mac.	S. Zone
Jan.	0	3	0	0	0	0	3
Feb.	0	3	0	0	0	0	3
Mar.	0	7	1	4	3	0	15
Apr.	2	18	7	14	14	7	62
May	17	35	15	31	25	47	170
June	26	38	18	34	31	57	204
July	27	38	19	34	31	60	209
Aug.	24	32	19	29	27	54	185
Sept.	23	23	15	17	12	49	139
Oct.	22	11	13	14	8	49	117
Nov.	3	5	4	5	0	9	26
Dec.	0	3	0	0	0	1	4
No.of skippers in poll	28	43	22	37	31	66	227

9.2 Copes and effort reduction

As the vast majority of skippers (87%) agreed with Copes' conclusions that there are too many fishing units in the Southern Zone, it can be assumed that there is wide recognition within the industry of the need for effort reduction. It is interesting, however, that 21 of these 215 then turned around to say that they thought no boats should be taken out of the industry when asked by what proportion they thought the fleet should be reduced. A total of 51 (21%) of skippers thought that no reduction should occur, these presumably being opposed to management intervention to achieve effort reduction.

It still remained, however, that 79% of skippers agreed with Copes' proposition that boats should be taken out of the Southern Zone, and 57% thought that the number should be greater than his recommendation of an initial reduction of one-third in the size of the fleet.

The differences between the ports is rather staggering, indicating the diversity of opinion within the zone.

C R O S S T A B U L A T I O N O F
V206 COPES-33% OUT by V3 PORT
Page 1 of 1

V206	Count / Col %	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
0%	0.	5	6	5	13	8	14	51
		16.1	12.5	21.7	33.3	23.5	19.4	20.6
LESS THAN 33%	1.	12	13	7	6	4	13	55
		38.7	27.1	30.4	15.4	11.8	18.1	22.3
33% & OVER	2.	14	29	11	20	22	45	141
		45.2	60.4	47.8	51.3	64.7	62.5	57.1
	Column Total	31	48	23	39	34	72	247
		12.6	19.4	9.3	15.8	13.8	29.1	100.0

9.3 Effort Reduction Through Buy-Back

Effort reduction through a vessel buy-back authority was one of the major recommendations made by Copes in his report, and it is probably the most controversial of management proposals, especially in the context of non-transferability of licences.

The high level of agreement among fishermen that there are too many boats in the Southern Zone and that there needs to be a substantial reduction in the size of the fleet has been clearly established. A similarly high percentage (72%) of skippers consider that Copes' proposal for a buy-back authority is an appropriate management mechanism for the fishery, while 23% thought it was not and 5% did not know one way or the other. There were very large variations between the ports in the level of support for the notion of buy-back, varying from 60% at Southend to 85% at Robe. The table gives the number of boats where skippers support the buy-back notion.

************************************** C R O S S T A B U L A T I O N O F **************************************
V207 COPES-BUY BACK APPROPRIATE by V3 PORT
Page 1 of 1

V207	Count / Col %	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RCK 5.	PT MAC 6.	Row Total
YES	1.	22 71.0	41 85.4	15 65.2	22 59.5	24 70.6	52 73.2	176 72.1
NO	2.	7 22.6	6 12.5	7 30.4	13 35.1	9 26.5	14 19.7	56 23.0
DK	3.	2 6.5	1 2.1	1 4.3	2 5.4	1 2.9	5 7.0	12 4.9
	Column Total	31 12.7	48 19.7	23 9.4	37 15.2	34 13.9	71 29.1	244 100.0

Number of missing observations = 3

Administrative arrangements for a buy-back authority, if established, are of vital concern to the industry. Fishermen were not very definite in their views on this question - except the 20% or so who were totally and irrevocably opposed to the notion of buy-back. Lack of firm ideas on how a buy-back ought, if established, to be administered probably reflects the fairly widespread misunderstandings of what Copes proposed in his report. However, those who were able to give an opinion were almost evenly split between three broad alternatives - total government control of the authority (N = 41 or 21% of skippers); total industry control of the authority (N = 46 or 23%); and a mixture of government and industry representation on the authority (N = 44 or 22%). A further 31 skippers (16%) had rather vague ideas that indicated lack of real understanding of the potential role of a buy-back authority and the roles government and the industry might play in its administration.

Copes recommended that under a buy-back scheme up to 50% of pots taken out of the fishery would be available for reallocation to deckhands and to boats remaining in the fishery to bring their pot allocation up to a level so as to ensure an economically viable fishing unit. Fishermen were asked what proportion of pots they thought should be available for redistribution in this manner.

It is interesting that there was overwhelming opposition to this notion, with 81% of skippers saying that no pots taken out of the fishery be available for redistribution to those remaining in the industry. However, in Carpenter Rocks this view was held by only 62% of skippers, while it went to as high as 97% in Southend. Among the minority of skippers who thought that under a buy-back scheme a proportion of pots taken out should be available for redistribution to those boats remaining in the fishery, only 13 skippers thought it should be 50% or over, another 13 thought it should be 20 to 50%, and 19 thought it should be under 20% reallocation. The industry is thus strongly opposed to the notion of any redistribution of pot authorities that may be taken out of the fishery due to buy-back. The logic of this opposition is convincing, namely that the whole objective of effort reduction is to reduce the number of pots that are being fished.

However, if pots were available for reallocation in the manner proposed by Copes, it is rather ironic that just over one-third (N = 83) of the fishermen claim that they would be interested in purchasing additional pot authorities. The figure was as high as 50% in Carpenter Rocks and as low as 13% in Southend. It may be assumed that fishermen, while in general not wishing to have additional pots in this way rationalised that if more pots were available and others were going to get them, then "I'll get into the act too." The price fishermen would be prepared to pay for these additional pots varied, with 11 saying they would pay less than $100 per pot, but 43 would pay up to $200 and 20 would pay over $200 per pot authority.

9.4 Who would sell to a buy-back authority?

While support for the notion of a buy-back authority as a means of achieving effort reduction is high among fishermen, it is difficult to get an accurate indication of the number of people who would voluntarily participate in such a scheme.

On the basis that boat owners would get a satisfactory price for their boats, licence and pot authorities, a total of 41 boat owners (17%) would definitely be interested in selling to a buy-back authority if established. The number of boat owners who may be interested in selling to a buy-back authority was 57 (23%). The numbers in these categories in the six ports were:

	No. of boats	
	definitely interested in selling to buy-back	may be interested to sell to buy-back
Kingston	1	4
Robe	13	7
Beachport	5	1
Southend	7	11
Carpenter Rocks	2	14
Port MacDonnell	13	20
Total	41	57

The proportion of boats in each port that would definitely or perhaps be interested in selling to a buy-back is not strictly proportional to the size of the port. However, it is interesting that in the biggest port, Port MacDonnell, just under one-third of the boats could be candidates for a buy-back, while in the next biggest port, Robe, almost 40% may participate. In Southend a little under half of the boats may be candidates for a buy-back scheme. At Kingston only about 15% of boat owners have any interest at all in a buy-back scheme. At Beachport, the smallest of ports, about one-quarter of the boat owners have a potential interest in buy-back. At Carpenter Rocks (which includes boats fishing out of Nene Valley and Blackfellows Caves), the peculiar situation of the large company fleet needs to be realized, but even so almost one-half of the boats are possible starters in a buy-back scheme.

It must be emphasised that these levels of potential participants in a buy-back do not mean that this number of boats are even likely to be sold to a buy-back. However, it is highly likely that at least a considerable number of boat owners would sell to a buy-back authority. The level of actual participation in a buy-back would, of course, depend on a whole range of factors, particularly whether or not such an authority would be able to pay the price these potential participants were to ask for their boats and authorities. Thus the financial incentive to sell is of vital importance. Also, potential participation rates would depend on the level of disincentives that existed for people to stay in the fishery, this being determined by the level of financial contribution that they would be required to make to a buy-back scheme.

Those who are potential participants in a buy-back scheme were mainly those who had been in the industry since before 1969 (34 out of 41 definite participants, 41 out of 56 of the may be interested). Two-thirds had had a job prior to becoming a fisherman. They tended to be the older fishermen, about half were born in the Southeast, almost all were married, and mostly their wives had no job. They either owned or were purchasing their homes. Few had qualifications for jobs other than fishing. About one-third of them still owed money on their boats, but mainly under $10,000.

The type of fishing units that are potential candidates for a buy-back scheme is interesting.

Most of the boats are larger than 9 metres, with about one-third of those definitely interested in selling being the largest boats over 12 metres. Over one-half were conventional hulls. It is significant that almost one-third had upgraded their boats in the last three years. Most of them fished over 60 pots, and they tended to fish 100 to 150 days in the 1978-79 season. Of those definitely interested in selling to a buy-back authority, over one-third had their boats on the market at the time of the survey. About one-third of those definitely interested potential participants had catches of 200 bags or more during both of the last two seasons, and well over half of them had caught 150 bags or more. Relatively few of these potential participants had small catches of under 100 bags. About one-third thought that they needed to catch a minimum of 200 bags to make a season profitable, and nearly 60% thought that they had to catch at least 150 bags. About half of them expect to supplement their income in the 1979-80 season by fishing for shark and/or tuna.

When asked what they would want for their boats and authorities, fishermen tended to be realistic about the market value of their fishing units. Of the definitely interested, three owners would want over $80,000, six between $60,000 and $80,000, six between $40,000 and $60,000, nine between $20,000 and $40,000, and five under $20,000. It needs to be remembered that a large proportion of these potential participants in buy-back are experienced fishermen with good levels of catches and seemingly efficient fishing units. The big majority of owners who may be interested in selling to a buy-back authority would want $20,000 to $60,000 for the boats and authorities.

The following tables indicate the number of potential participants in a buy-back authority, both those definitely interested and those that may be interested, by selected characteristics of fishing unit:

Characteristic of the fishing unit	Number of boats potential participants in a buy-back scheme	
	Definitely interested in selling	May be interested in selling
Size of boat:		
Less than 6 metres	1	3
6 to 9 metres	10	17
9 to 12 metres	17	27
Over 12 metres	13	10
Av. no. pots fished:		
Less than 50	7	9
50 - 59	3	7
60 - 69	10	18
70 - 79	14	13
80 & over	4	7
No. days fished 1978-79:		
Less than 100	5	5
100 to 135	10	17
135 to 150	6	18
151 to 199	6	10
200 & over	4	1
Boat currently on market:		
Yes	14	3
No	27	54
Price expected for boat & authority:		
Up to $20,000	5	10
$20,000-$40,000	9	26
$40,000-$60,000	6	10
$60,000-$80,000	6	3
Over $80,000	3	4
Bags caught 1978-79:		
Less than 100	8	11
100 to 149	8	20
150 to 199	5	12
200 & over	9	9

Cont.....

	Definitely	May be
Minimum bags needed to make season profit-able:		
Less than 100	7	10
100 to 149	11	22
150 to 199	8	10
200 & over	14	14

The total costs of a buy-back scheme to reduce effort in the Southern Zone has been estimated from the survey data to be $2.12 million for the 41 boats that have owners who indicated that they would be "definitely interested in selling", and a further $2.79 million for the 57 boats whose owners expressed that they "may be interested in selling". The estimates are based on what the owners stated they would accept as a "fair and reasonable price". These figures were above the estimated market value of their boats and authorities of $1.99 million and $2.25 million respectively, indicating that the above market price incentive element for a buy-back would need to be approximately 6.5% for those "definitely interested in selling", and 15.4% for those who "may be interested in selling".

If these potential participants did sell, then on the basis of the present pot allocation of boats, there would be a reduction of 2,795 pots (or 18.1%) if those "definitely interested" sold, and a reduction of 42.7% of pots if all of them sold.

9.5 Will fishermen contribute to the costs of a buy-back scheme?

Fundamental to the notion of effort reduction through a buy-back authority is the question of who pays for the boats that are taken out of the fishery. It is suggested in the Copes Report that it would, in the longer term at least, be financed by the fishermen who remain in the industry. This would require the levy of charges additional to the relatively low level of licence and other fees currently paid by fishermen in the industry.

Payment of fees of any kind is an emotive issue for all people, and fishermen are understandably vociferous in their opposition to any proposal that would involve their having to pay more for the right to fish. In the context of Copes' recommendation for effort reduction through buy-back, one needs to relate the question of fishermen remaining in the fishery contributing to the costs of a buy-back scheme to the proposition that effort reduction in this way would lead to increased catches and more assured economic viability for those who remain. This proposition necessarily contains lots of "ifs" and "buts". Thus, it is extremely difficult to collect data from fishermen on what level of contribution they would be prepared to make or would see as being necessary for them to make to finance a buy-back authority. Irrationality through emotive attitudes towards any form of government intervention in the industry and especially to increased fees and charges and the uncertainty of how better-off would be those who remain in the fishery thus made the study team's task very difficult on this question of "who pays and how much?"

It was, therefore, not surprising to find that 50% of skippers said that they would refuse to pay any additional fee towards the cost of effort reduction through a buy-back authority for each boat taken out of their port. This opposition was somewhat less (45%) when asked if they would be prepared to pay if one-third of the boats in the Southern Zone were taken out through a buy-back scheme. There were big differences between the ports, however, in the level of this outright opposition to paying for the costs of buy-back.

Percentage opposing paying anything for buy-back:

	Kingston	Robe	B/port	Sth^{d}.	C.Rocks	Pt.Mac.	S. Zone
For each boat per port	39%	40%	52%	64%	62%	49%	50%
For 1/3 reduction in S. Zone fleet	39%	33%	48%	56%	62%	40%	45%

It is evident that overall a majority (if slight) of fishermen were able to recognize that a buy-back scheme would necessitate them in contributing to its cost, but around half of these were unable to indicate what figure per annum they would be willing to contribute to the cost of the scheme for each boat taken out of their port. However, in the Southern Zone 17% of boat owners indicated that each boat taken out of their port would be worth at least $100 p.a., and 6% said it would be worth over $500 p.a. The figures for the six ports were:

Per annum contribution for each boat taken out of each port through buy-back:

	Kingston	Robe	B/port	Sth^{d}.	C.Rocks	Pt. Mac.	S. Zone
	N	N	N	N	N	N	N
Under $100	4	-	3	-	1	6	14
$100 to $499	7	9	2	5	2	3	28
$500 & over	-	8	1	3	-	2	14

It is more realistic to look at contribution towards the cost of effort reduction through buy-back by fishermen who remain in the fishery in the context of an overall one-third reduction in the size of the Southern Zone fleet. Because of the problems fishermen had in considering this question - due to the problems referred to above concerning uncertainty over improved catches and increased productivity for those remaining - it was possible for only 35% of owners to nominate a figure. Despite this, it is significant that

14% said they would contribute over $1,000 p.a., and 25% said over $500. Of these, 5 owners gave a figure of $3,000 p.a. or over and a further 9 indicated $2,000 to $3,000 p.a. Between $500 and $1,000 p.a. was nominated by 11% of owners and a further 15% said up to $500 p.a. Again there were differences between the six ports not related to relative size of the port.

Per annum contribution for 1/3 boats taken out through buy back:

	Kingston	Robe	B/port	Sth^d	C.Robks	Pt.Mac.	S.Zone
	N	N	N	N	N	N	N
Up to $500	6	8	4	5	3	10	36
$500 to $999	5	9	2	2	-	10	27
$1,000 & over	5	9	5	4	4	11	35

When this question is considered only for those boat owners who would definitely not be interested in selling to a buy-back authority, then out of the 136 owners in this category, 15% (N = 20) said they would pay over $1,000 p.a. for a 1/3 reduction in the Southern Zone fleet, 12% (N = 16) would pay $500 to $999, and 14% (N = 19) would pay up to $500. A further 13% (N = 17) did not wish to nominate an amount. However, 47% indicated total opposition to paying anything.

9.6 Alternative Effort Reduction Strategies

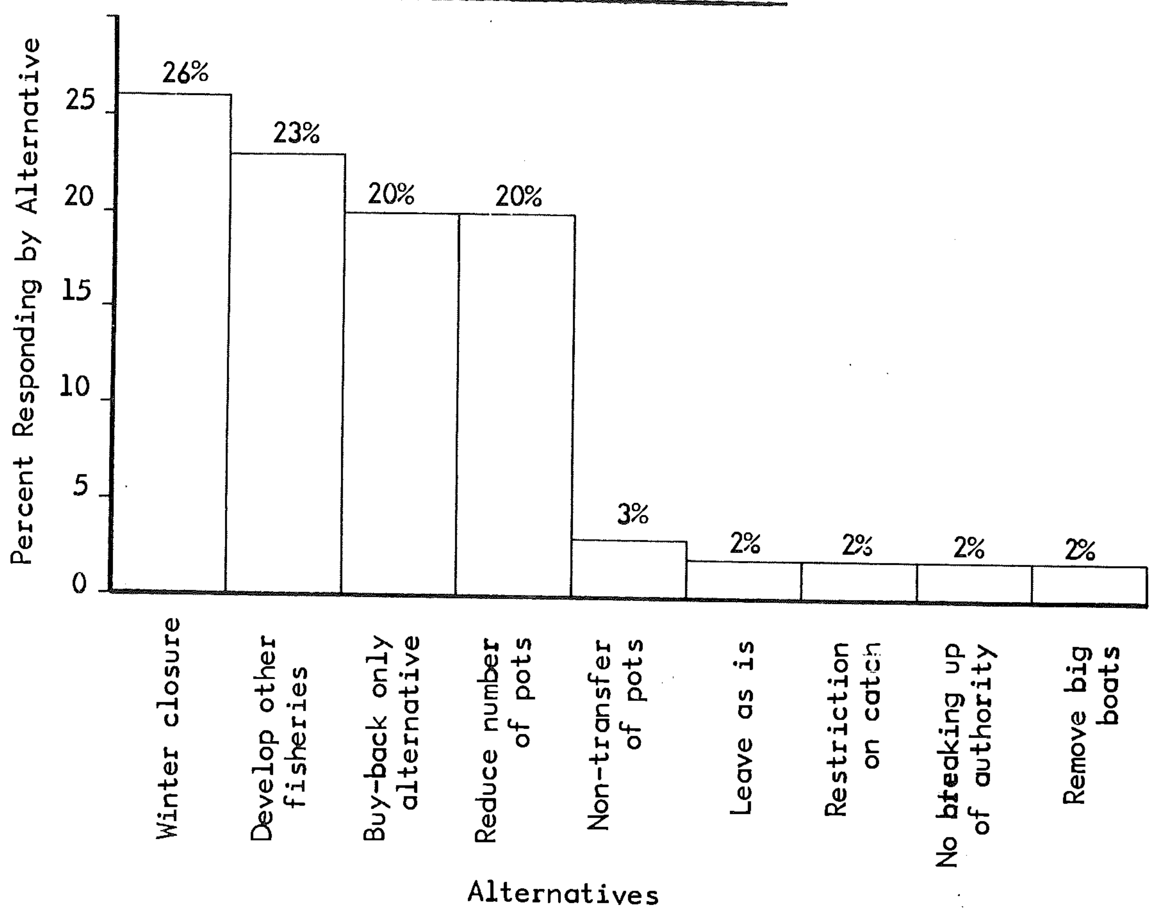
Respondents to the survey were asked to suggest strategies, other than buy-back, to reduce effort in the fishery.

Mostly fishermen were not able to give specific details on alternative approaches, and in fact 18% thought that a buy-back authority was the only way to achieve effort reduction.

Reduction in the number of pots allocated to boats was suggested by 17% of fishermen. This is a similar percentage of fishermen who agreed with the proposition that "There should be a pot reduction of 10 per boat" (22%). A further 20% of fishermen proposed the development of other fisheries, such as squid, tuna and leatherjacket, as an alternative to cray fishing. Extended winter closure was proposed by 22% of fishermen. A handful of other effort reduction proposals were mentioned, such as do not let those who sell their boats also sell their authorities (3%); restrict the breaking up of pot authorities (2%); buy out the big boats or force them into some alternative fishery such as sharking or squid (2%); and place a quota on the number of bags each boat can catch in a season (2%). It was suggested by 2% that nothing should be done at all and that, because of declining productivity and increased costs the least efficient fishermen would drop out through a process of economic squeeze.

There was some variation between ports in support of different forms of effort reduction. In Kingston the only alternative not mentioned was the encouragement of big boats into some other fishery, with more people mentioning winter closure (N = 6) and pot restriction (N = 6) than any other alternative. In Robe winter closure (N = 11), buy-back (N = 10) and pot restrictions (N = 8) received support in that order. In Beachport winter closure (N = 5) was mentioned more than any other alternative, however, the development of alternative fisheries (N = 5) received more support in this port than in Robe. In Southend, also, development of alternative fisheries was mentioned by a number of fishermen (N = 7), but more mentioned pot restrictions (N = 10) than any other alternatives. Six fishermen mentioned winter closure. In Carpenter Rocks seven fishermen saw a buy-back as the only alternative, five mentioned winter closure and four development of other fisheries. In Port MacDonnell, possibly as s response to the experience of fishermen in this port with tuna fishing during the winter closure, thirteen individuals suggested the development of other fisheries; winter closure was mentioned twelve times and pot restriction nine times.

Effort Reduction Alternatives



N = 176

10. WHAT WOULD PEOPLE DO WHO LEAVE THE FISHERY?

Effort reduction in any industry has important implications for redeployment of labour. Often people have to move their place of residence if they leave an industry, particularly when they live in small towns that have limited and declining employment prospects. Thus, if effort is reduced in the fishery through buy-back or by other means, it is important to look at the implications this would have for the ports that the people live in and what jobs these people could get and where these may be located. This will be the topic of a separate paper, and here only a brief summary of some potential effects of effort reduction are given.

10.1 Reliance on Fishing as an Income Source

Very few fishermen in the industry derive income from sources outside fishing. Where people did, on occasions they had investments in a number of activities.

Farming was undertaken by 8% of fishermen (N = 21) mainly in the Port MacDonnell and Carpenter Rocks end of the coast. Income was derived from investment in property and/or business related to fishing (e.g. gear supply and repair, maintenance of boats and engines, fish processing) by 10% of fishermen (N = 25) mostly at Robe and Southend. Only 4 fishermen had investments in property related to tourism. Investments in property not related to fishing and tourism were held by 10% of fishermen (N = 26). Only 11 had investments in shops or other business, and 7% (N = 18) had other investment derived income.

10.2 Preferred Activities as Alternative to Fishing

While it is obvious that fishermen almost always want to remain so until they retire, respondents were asked to consider what they would do if they left the rock lobster fishery either voluntarily as at present or were enticed to sell to a buy-back authority. Naturally enough many fishermen had not ever thought of this possibility and some chose not to! Thus, 20% said that they did not know what they would do if they sold out. Retirement would be an alternative for 10% of fishermen. Just under 30% would seek to enter an alternative fishery. Only 6% would seek to go back to their former trade or area of work, and 13% would take up farming full time. A further 7% would live off investments or go into a business venture. The following table shows that there were big differences between the ports. In Carpenter Rocks, Port MacDonnell and Beachport more were likely to want to go into another fishery than at Kingston and Southend. At Kingston and Beachport more were likely to favour farming than elsewhere, while at Port MacDonnell relatively more would seek to enter a business or live off investments. It is interesting that a much greater proportion had no idea what they would do at Southend than at the other ports.

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************************************** C R O S S T A B U L A T I O N   O F *****
*********************************
  V232      TYPE OF WORK IF SOLD OUT                              by  V3          PORT
*******************************************************************************************
***************** Page  1 of  1
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V232	Count / Col %	V3 KINGSTON 1.	ROBE 2.	BEACHPORT 3.	SOUTHEND 4.	CARPENTER ROCKS 5.	PT MACDONNELL 6.	Row Total
DK	0.	7 21.2	12 25.0	5 21.7	14 35.9	3 8.8	7 9.5	48 19.1
RETIRE	1.	4 12.1	5 10.4	2 8.7	6 15.4	4 11.8	5 6.8	26 10.4
OTHER FISHING	2.	6 18.2	12 25.0	8 34.8	8 20.5	13 38.2	24 32.4	71 28.3
FORMER TRADE	3.	1 3.0	4 8.3	1 4.3	1 2.6	1 2.9	6 8.1	14 5.6
FARMING ETC	4.	6 18.2	5 10.4	6 26.1	4 10.3	2 5.9	9 12.2	32 12.7
INVESTMENTS-BUSI	5.	3 9.1	3 6.3	0 0.0	0 0.0	2 5.9	8 10.8	16 6.4
OTHER	6.	6 18.2	7 14.6	1 4.3	6 15.4	9 26.5	15 20.3	44 17.5
Column Total		33 13.1	48 19.1	23 9.2	39 15.5	34 13.5	74 29.5	251 100.0

When we consider just those fishermen who skipper boats that are potential participants in a buy-back scheme, somewhat different results were obtained.

Preferred activity for participants in a buy-back scheme:

Activity	Definite Participants	May participate
Retire	17%	12%
Other fishery	24%	30%
Former trade	7%	4%
Farming	17%	11%
Business, live off investment	7%	9%
Other	17%	19%
Don't know	10%	16%

10.3 Demand for Subsidies & Retraining

If they were to leave the industry, 32% of fishermen in the Southern Zone would expect some form of government assistance, the percentage varying from 27% at Port MacDonnell to 53% at Carpenter Rocks.

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************************************** C R O S S T A B U L A T I O N   O F *****
********************************
   V233      EXPECT GOVT. ASSIST                          by  V3            PORT
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***************** Page  1 of  1
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V233	Count / Col %	KINGSTON 1.	ROBE 2.	BEACHPORT 3.	SOUTHEND 4.	CARPENTER ROCKS 5.	PT MACDONNELL 6.	Row Total
YES	1.	7 24.1	13 27.7	11 50.0	9 25.0	16 53.3	19 27.1	75 32.1
NO	2.	19 65.5	28 59.6	10 45.5	24 66.7	14 46.7	50 71.4	145 62.0
DK	3.	3 10.3	6 12.8	1 4.5	3 8.3	0 0.0	1 1.4	14 6.0
	Column Total	29 12.4	47 20.1	22 9.4	36 15.4	30 12.8	70 29.9	234 100.0

Number of missing observations = 17

Rather surprisingly, of those who would be definitely interested in selling to a buy-back authority, only 23% would want government assistance, while 33% of possible participants would do so.

The type of government assistance fishermen would want varied between ports. A retraining scheme for alternative employment would be wanted by 14 fishermen. Subsidy to establish in another fishery or a business venture would be wanted by 26 fishermen. Only two fishermen would want both subsidy and retraining. Other forms of assistance would be wanted by 18 fishermen. Often this type of help related to assistance to sell their home and relocate elsewhere, and/or long term low interest loans to enter another fishery or undertake a business venture often relating to tourism or a small shop.

Of those who were definitely interested in selling to a buy-back scheme, only one fisherman said he would definitely want retraining for alternative employment, three would want a subsidy, one would want both, and three would want some other form of assistance. Only 16 of those who would perhaps be interested in selling to a buy-back scheme would want any government assistance.

10.4 Where Would People go to Live?

As most fishermen had not really entertained the possibility of selling up and going elsewhere to work, it was difficult for them to indicate where they thought they would go to live if this was to occur. The majority would wish to stay where they now live. Indeed cray fishermen in the Southern Zone are not a very mobile lot as 71% had lived at the same place since 1968. Obviously there are greater employment opportunities in the southern end of the coast near the major urban centres of Mt. Gambier and Millicent. A total of 92 fishermen indicated they thought they would have to move house, but of these one-third thought it would be to elsewhere in the Southeast, either to fish at another port in another fishery or to work in one of the larger towns. Only eight indicated that they would go to Adelaide. A total of 15 indicated that they would go interstate or to another country to fish. A total of 22 did not know where they would seek to go.

Of those who were definitely interested in selling to a buy-back authority, only 16 said that they would probably have to move house, many of them preferring to remain in the Southeast or wishing to go interstate to fish. It was similar for those who may be interested in selling.

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11. DECKHANDS

11.1 Biographic Characteristics of Crew

11.1.1 Sex

All of the deckhands interviewed were male. Informal discussions revealed that, in the past a few vessels had female crew, however none were found during the period of this survey.

11.1.2 Age

Ages were fairly evenly distributed across the categories used (under 20, 20-25, 26-30 and over 30) with approximately 25% in each category. However, there were considerable differences between ports. Beachport and Southend typically had older and Carpenter Rocks younger crew than average.

11.1.3 Place of Birth

Over 60% of deckhands were born in the Southeast (20% in their home ports). Ten percent were born interstate (these fished mainly out of Robe and Carpenter Rocks) and a further 10% were born overseas (these fish mainly out of Beachport and Southend).

11.1.4 Mobility

Forty percent of deckhands interviewed had lived 15 years or more in their home ports. A further one-third had spent at least six years there.

Contrary to many stories that were heard during preliminary studies, crew do not appear to be the itinerants that many believe them to be. Forty-five percent have not shifted in the last 10 years and only 25% have had two or more shifts in that period.

11.1.5 Education and training

Two-thirds of deckhands left school at age 15 or 16. Only 13% remained at school beyond 16. However, over 20% claimed some trade or other qualification.

Over 80% of crew had some relatives involved in the fishing industry.

11.1.6 Marital Status

Forty-four percent of crew interviewed were or had been married and 30% had dependent children (11% had three or more dependent children). Of those married, two-thirds of the wives were not working and only 10% of wives had full-time jobs. Forty percent of working wives did not work in their home port and only a total of three deckhands wives worked in fisheries related industries. Only 6% of working wives earned more than $5,000 per year.

11.1.7 Accommodation

One-quarter of the deckhands either owned their own homes or were buying them. A further 30% lived in rented accommodation. One-third still lived with their parents. 75% paid $80 per month or less for accommodation.

11.1.8 Employment History

Over one-third of deckhands had not had a job before entering the industry. The percentage was much higher - nearly double - in Carpenter Rocks where boys tend to leave school and enter the family business directly.

Of those who had worked before becoming deckhands, 25% had worked on farms (substantially more - 30% - in Robe and less - 10% - in Beachport). Over 40% had had labouring jobs (more popular in Carpenter Rocks and Port MacDonnell and less so in Kingston). One-third had had skilled or professional employment and a further 16% clerical or sales jobs.

In the main prior farming jobs tended, not surprisingly, to be from the surrounding area. Other types of employment however were much more widely dispersed.

Over one-quarter of those who had been employed before becoming crew claimed that that job required some trade or other qualification.

11.2 Committment to Fishing

Because the interviews were conducted in the "winter" there may be some bias towards including only those who were more committed to the fishery. Thus the results which follow should be interpreted bearing that in mind.

Three-quarters of the deckhands expressed the wish to remain permanently in the industry. Differences between ports were not great. However, there seemed to be slightly less committment among deckhands in Beachport.

Thirty-two percent were members of the Professional Fishermen's Association. The likelihood of membership tended to increase the further south one went. Forty-four percent were members of SAFCOL and in this case the opposite trend was evident.

Over three-quarters of respondents have entered the industry since 1971. However, there are substantial numbers, particularly in Southend and Port MacDonnell that have had more than ten years experience. Overall however, 30% of crew interviewed had been in the industry for one year or less. In Port MacDonnell however this category accounted for over 40%, whereas in Beachport (10%) and Kingston (18%) crew generally had more experience.

Of the 168 crew interviewed 23 held Certificates of Proficiency (Skippers tickets). Of these 12 had held it for four years or more and 14 had actually skippered crayboats - six of these for more than two years.

Nearly 60% of deckhands claimed to be "doing something about" obtaining a Certificate of Proficiency and of these 40% expected to receive it this season. A further third expected to complete it within two years.

Nearly 70% (N = 102) of the deckhands interviewed stated that they intended owning their own boats. Six of these were currently looking for boats to buy and another 25 expected to buy one within two years. Three of the six attempting to buy boats stated that they were having difficulties raising the necessary finance.

Two-thirds came from families that were also involved in fishing and over 80% had some relatives fishing.

11.3 Effects of Winter Closure

Only 45% of crew interviewed were involved in boat maintenance during the winter closure. It should be noted that, by interviewing during the winter, this figure is very likely to be inflated.

During the closure 14 crew (8%) were involved in tuna fishing - all from Port MacDonnell. Twenty-one percent went shark fishing. A large proportion of these operated out of Robe and very few from Beachport, Carpenter Rocks and Port MacDonnell.

Contrary to most expectations no deckhands interviewed worked for local councils during the closure. Of course, some deckhands had more than one job, while others did not find work at all. Ten went fox shooting, sixteen found farm work, eighteen worked in building and construction, three in factories and a further 32 jobs were found in labouring and other activities.

Three-quarters of the respondents stated that they did not go on the dole for any of the closure. However, one-fifth were on the dole for the whole period. The likelihood that a person was on the dole was lowest in Kingston (8%) and increases steadily as one moves south along the coast to Port MacDonnell where 28% of crew were on the dole for the whole period.

Only 18% of crew stated that the recent closure had any effect on what they would normally have been doing at that time of the year.

11.4 Local Committments

The overwhelming majority of deckhands interviewed (81%) had operated out of one port only. Over one-third have only worked on one boat. A further third however have worked on three or more boats. There would thus appear to be less mobility than most would expect.

There were fairly clear local loyalties for banking and major shopping expenditures.

Eight percent of deckhands were members of some local service organization and fifty percent were members of sporting clubs. Local cultural (2%) and church organizations (4%) were less popular.

11.5 Income

There were considerable differences in income between ports. Only one-quarter of crew in Kingston earned less than $5,000 in 1978-79 whereas 40% in Robe and 75% in Carpenter Rocks did so. Over 40% of crew in Kingston and 37% in Beachport earned more than $10,000. None did so in Carpenter Rocks and only one-quarter of crew in other ports earned over $10,000.

It is interesting to note that, with the exception of Carpenter Rocks (where very few have any income apart from fishing), crew from Kingston received less from sources outside fishing than those from other ports.

Sixty-five percent of deckhands received one-quarter or more of the catch in payment for their services and over one-half were not expected to contribute to costs. Fifteen percent however contributed at least one-fifth of the cost of bait and fuel.

Sixty percent employed the services of an accountant to complete their tax returns.

11.6 Opinion of Copes Report

Three-quarters of deckhands interviewed had not read Copes' Report (25% had not even heard of it). Only 25% had discussed the report with their skippers and less than 10% supported its recommendations. One-third of crew were prepared to say that they saw some good and some bad points in the report while 22% were totally opposed to it.

Three-quarters of crew believed that they would find work on another cray boat if their present boat were sold to a buy-back authority.

All deckhands interviewed were asked if they believed that a buy-back would affect their chances of owning their own boats. Eighteen percent believed that such a scheme would make it impossible to do so and a further 65% believed that, in some way or other, it would make it more difficult for them.

If forced out of fishing 70% of deckhands said that they would want some retraining - if it were free. Seventy percent of these favoured training in some form of skilled trade.

11.7 Issues affecting deckhands

Several issues, which the panels of deckhands had suggested as important, were put to all respondents. Each is taken in turn below.

i. *Deckies have the right to Workers' Compensation.*

Support for this proposition was less strong than most would have expected. Only 40% of crew supported the proposition, 10% were not committed and 50% opposed it.

ii. *Deckies should have an allocation of pots according to their experience.*

Perhaps surprisingly over 60% of crew disagreed with this proposition.

iii. *"If a buy-back scheme were introduced and the boat I work on was bought out, I would find it difficult to remain in crayfishing."*

A surprisingly high 45% disagreed with this proposition. A similar number, however, recognized the difficulties they could face.

iv. *"If a buy-back scheme were introduced and the boat I work on was bought out, I would find it easy to move into another fishery."*

Contrary to reasonable expectations from responses to the previous question 51% disagreed with this proposition. - Is there some reasonable interpretation of this anomaly apart from the possibility that the question was poorly worded?

v. *"If a buy-back scheme were introduced the government should provide a retraining scheme for deckies who lose their jobs so that they can move into an industry outside fishing."*

Nearly three-quarters of crew agreed with this proposition.

vi. *"I would be prepared to move out of fishing completely if I could get a job that paid me a guaranteed gross annual income of $8,000."*

Thirty-five percent of crew agreed with this proposition. A surprisingly high 41% of Kingston crew agreed where over 50% very likely were already making as much or more from fishing.

11.8 Concluding Comment - Deckhand Questionnaire

This has been a "first look" only at the deckhands questionnaire and clearly a more detailed analysis is required before any definitive answers can be made regarding the effect of buy-back on deckhands.

The immediately obvious and interesting point to emerge from the deckhands' questionnaire is the number of people who have what appears to be a real committment both to the fishery and to the Southeast. The large numbers who expect to remain in the fishery for the rest of their lives, the number that are presently studying for their Certificate of Proficiency and the number who have expressed the desire to buy boats all must be considered by any future effort reduction authority. The fact that answers to some questions may not appear completely rational should not detract from this assertion.

CROSSTABULATION OF V67 GROSS 78-79 by V3 PORT Page 1 of 1

V67 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RKS 5.	PT MACD 6.	Row Total
1. UNDER $5000	6 27.3	17 42.5	5 26.3	14 37.8	9 75.0	10 26.3	61 36.3
2. $5000 - $7500	4 18.2	5 12.5	5 26.3	8 21.6	2 16.7	13 34.2	37 22.0
3. $7501 - $9999	3 13.6	7 17.5	2 10.5	5 13.5	1 8.3	6 15.8	24 14.3
4. OVER $10000	9 40.9	11 27.5	7 36.8	10 27.0	0 0.0	9 23.7	46 27.4
Column Total	22 13.1	40 23.8	19 11.3	37 22.0	12 7.1	38 22.6	168 100.0

CROSSTABULATION OF V50 MEMBER PFA by V3 PORT Page 1 of 1

V50 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RKS 5.	PT MACD 6.	Row Total
0. NO	20 90.9	29 72.5	12 63.2	22 59.5	7 58.3	24 63.2	114 67.9
1. YES	2 9.1	11 27.5	7 36.8	15 40.5	5 41.7	14 36.8	54 32.1
Column Total	22 13.1	40 23.8	19 11.3	37 22.0	12 7.1	38 22.6	168 100.0

CROSSTABULATION OF V51 MEMBER SAFCOL by V3 PORT Page 1 of 1

V51 (Count / Col %)	KINGSTON 1.	ROBE 2.	B PORT 3.	SOUTHEND 4.	CARP RKS 5.	PT MACD 6.	Row Total
0. NO	4 18.2	21 52.5	7 36.8	17 45.9	10 83.3	35 92.1	94 56.0
1. YES	18 81.8	19 47.5	12 63.2	20 54.1	2 16.7	3 7.9	74 44.0
Column Total	22 13.1	40 23.8	19 11.3	37 22.0	12 7.1	38 22.6	168 100.0