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DESCRIBING LABOUR MARKETS THROUGH KEY INFORMANTS

- A Pilot Study of Fishing Villages

in Peninsular Malaysia

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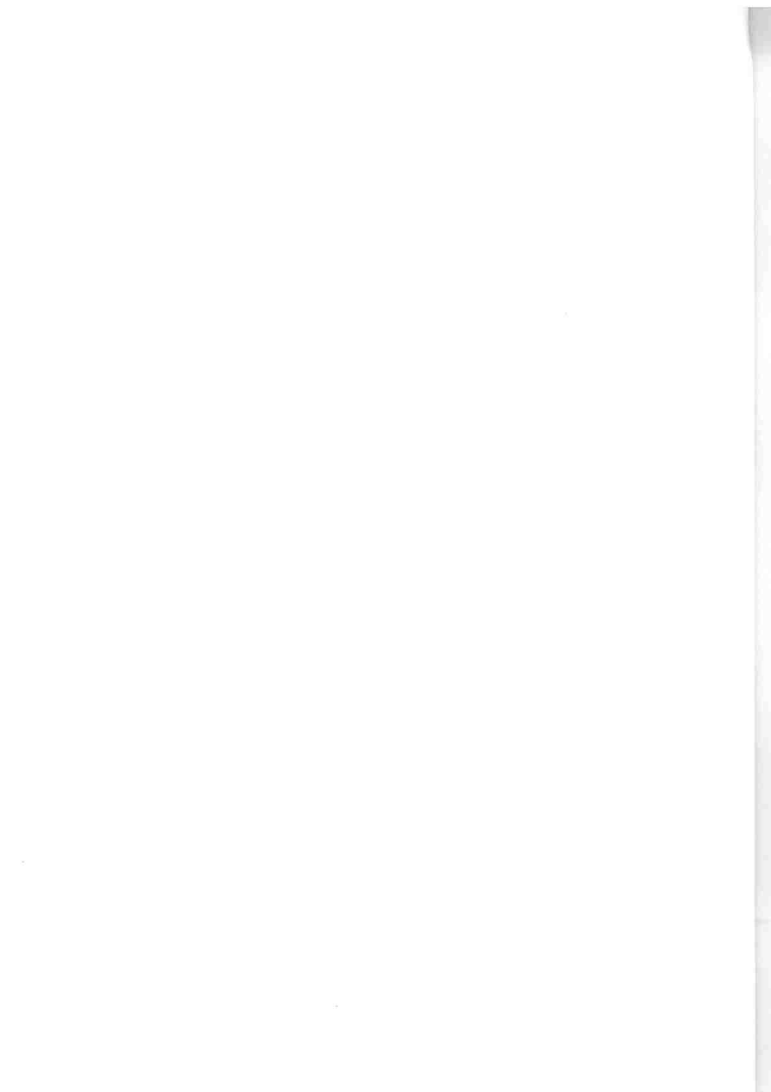
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INTRODUCTION

The Government of Malaysia was approached to carry out a pilot survey funded by the ILO, directed towards such problem areas as would be considered relevant to her needs. In June 1978 an agreement was signed between the Malaysian Government and the ILO whereby the Malaysian Government undertook to carry out a pilot survey on Key Informants approach to the collection of labour market information, and to report to the ILO on the experience.

The Manpower Department of the Ministry of Labour and Manpower was entrusted to undertake the survey and a Steering Committee was set up, comprising the following members :

Mr. Mohammad b. Yunus (Chairman of Steering Committee)	-	Economic Planning Unit
Mr. Zakaria Mohd. Taib/ Mr. Ashok Kumar Narula	-	Malaysian Administrative Modernization and Manpower Planning Unit (MAMPU)
Miss Chung Tsu Tuan/ Mr. Kam Teik Seng	-	Socio-Economic Research Unit (SERU)
Mr. Lee Mun Swee/ Mr. Ho Siow Keng	-	Department of Statistics
Mr. Foo Keat Lim/) Mr. Juhari b. Hj. Yahya))		
Mr. Abdullah Hj. Yatim/) Miss Sadiyah Abu Samah) (Secretary of Steering) Committee))	-	Manpower Department

The Manpower Department acted as the secretariat with P.M. Munch-Petersen, DANIDA expert attached to the department, serving as advisor to the project.

The objectives in undertaking the Pilot Key Informants survey were to:-

- (i) test the system as a means of producing information through which to identify such employment and labour market policies which are appropriate for increasing the welfare in different rural communities.

- (ii) assess the Key Informant approach as a device for monitoring the impact of rural development and poverty eradication programmes.
- (iii) design the survey in such a way that it would provide guidance in the effective deployment of key informants for later applications of the approach.

The Committee felt that pursuing the objective mentioned under (iii) would provide possibilities for checking the key informants' statements from alternative sources.

Various target groups were considered by the Committee as possible study areas. This included rubber small holders, padi farmers, fishermen and petty traders who have been identified as poverty groups. Factors such as the availability of information, the need to assess the effects of government programmes and the emphasis given to poverty eradication as a component of New Economic Policy were taken into consideration in choosing study areas. Two fishing villages were selected, one in Pangkor on the west coast of Peninsular Malaysia while the other in Kota Bharu on the east coast.

CHAPTER 1 : THE KEY INFORMANTS SYSTEM AS A NEW APPROACH

Labour market is in a continuous state of transition. Labour Markets deal with human resources and various skills offered by individuals. The range of reaction by individuals to changes in demand in Labour Markets is wider than in the case of suppliers of other resources. The governments moreover, tend to change the emphasis of their manpower policies at frequent intervals with consequential effects on labour markets. This complicated the task of producing adequate labour market information and make it impossible to determine at any one time what information should be made available. Therefore, the techniques of obtaining labour market information must be flexible, capable of promptly identifying and responding to changing needs.

In its publication, 'Labour Market Information in Asia', November 1979, ILO expressed its recognition of the changing needs for labour market information and the problems the producers face in achieving the flexibility required to respond to the changes. This requirement of flexibility has prompted attempts to find new ways of producing such timely information at a reasonable cost.

The Expert Group meeting of the ILO/Japan Regional Workshop in Manpower Assessment and Planning 1977 considered the possibilities of finding new ways of recording more promptly and regularly, signals emitted by different labour markets and interpreting them in order to understand better the functioning of labour markets. This would be of great help to those concerned with formulation and implementation of manpower policies and in particular, to vocational training authorities for the adequate planning of the appropriate training courses. This would also permit quick adjustment in training programmes in response to changing conditions in the labour market. The Expert Group emphasised that in the developing countries in Asia there was an urgent need to extend labour market information programmes into the rural sector. It was in this sector that the lack of manpower and employment information has become most acutely felt.

In this respect, the Group's starting point was that the needs for labour market information should be satisfied by the most economical means of data collection and analysis. Under fast changing needs for information, this might require new approaches which could be economical

to operate and yield quick results, complementing regular but resource demanding techniques of producing labour market information. A 'Key Informants System', through which the knowledge of selected persons is tapped and pieced together, was considered. Such a system among the techniques available, would improve the possibilities of balancing the cost and quality of such information and enhance its timeliness. However, the system should be thoroughly tested.

The concept underlying the Key Informants System is that, labour market information exists in the minds of a number of key informants, who are in daily contact with the community and its labour market situation. By applying the Key Informants System such knowledge can be mobilised. That is to say, tapping a pool of otherwise dormant labour market information, and piecing such information into a meaningful mosaic as determined by the use of the information. The statements by the key informants reflect not only the facts but also their perception of the socio-economic activities of the community.

The Key Informants System by its nature will provide imprecise information. The different purposes for which key informants statements are sought would require different degrees of precision. It follows that a Key Informants approach to the collection of labour market information should only be applied when the needs for information are clearly identified. In this respect key informant - based information differs from that acquired through conventional surveys. In principle the information collected through conventional surveys will be more precise and of wider application as compared to that of Key Informants. Thus, while labour market information obtained through usual surveys may be general in its use, that obtained through key informants may only be produced for specific purposes.

Since it is a person's knowledge which is being tapped, the selection of key informants must be based on what information they may possess and how it is affected by their perceptions. An effective selection presupposes that there are situations or positions in the community which are conducive to the acquiring of information sought and factors minimizing the subjectivity and biases inherent in their perceptions. It is possible through statistical methods to process labour market information produced through ordinary surveys to obtain a predetermined degree of accuracy. In the Key Informants approach, this statistical procedure is replaced by the selection of key informants.

The key informants' statements are integrated to describe a reality. The statements by their nature are imprecise and this inaccuracy will be increased the greater the number of key informants selected for the survey. Such drawbacks are difficult to overcome - they may only be reduced by enhancing the validity of the individual's statement.

The blend of facts and perception inherent in any statements by key informants makes a Key Informants Survey different from a conventional statistical survey. It is important therefore to realise the nature of the information collected through Key Informants System even at the planning stage. The above considerations influenced the design of the Pilot Key Informants Survey in Malaysia.

CHAPTER 2 : THE STUDY AREAS

Both of the two villages of Pangkor and Kedai Buluh are fishing villages, in terms of the number of people engaged in fishing as compared to the total workforce. However, there are still remarkable differences between the two villages which should reflect themselves in the labour market policies adequate and expedient for enhancing economic development and welfare in the two communities. It is part of this test of the Key Informants approach to examine how effective the information gathered will be as a basic for determining the said policies. That is to say, it will be examined whether or not the conclusions reached in respect of Pangkor will differ from those of Kedai Buluh, as it would be expected. If not, it means that those of the key informants' statements which are considered valid lack in the required precision. Consequently, the similarities and differences between the two villages must be identified. This is done below on the basis of the 1970 Population and Housing Census of Malaysia.

Population and Housing

The village of Kedai Buluh is situated on the estuary of the Kelantan river, about 6 miles north east of Kota Baharu, the capital of the state of Kelantan. In 1970, the population of Kedai Buluh numbered about 2,500 of which slightly more than half were in the age-group 0-14 while the remaining were in the age-group 15-64. The number of those above 65+ was negligible. Practically all the inhabitants were Malays living in 490 households each having their own quarters.

The Population Census also indicated the quality of the private living quarters. Almost all of the houses were raised above the ground and the walls were made of plank and bricks or plank only, very few had attap walls. The majority of the houses had roofing materials made of tiles, zink and asbestos and only a third of the houses had roofs made of attap. In spite of the apparently solid building materials applied, the Census rated two thirds of the houses as being "deteriorating, dilapidating", only a third were considered "sound". Nearly all the houses were less than 20 years old. In 1970 none of the living quarters had piped-water, but all of them, either had their own wells or pumps with other living quarters. Very few of the houses had electricity,

the main source of lighting for the rest was kerosene lamps, and about two-third of the quarters had no proper toilet facilities.

The village of Pangkor is situated on an island of Pangkor, which is about half an hour boatride from the town of Lumut on the mainland. According to the Census in 1970, the population of the village was about 1,850 of which slightly less than half, were in the age-group 0-14. The rest of the population was in the age-group 15-64, with the number of those above 65+ was being negligible. About 66% of the population were Chinese, 28% Malays and 6% Indians. The population was made up about 343 households sharing about 270 private living quarters, giving an average of 1.28 households per living quarter.

More than half of the living quarters were raised off the ground. The walls were almost exclusively plank and brick or plank. The roofs were mostly made of attap, but there were quite a number with roofs made of zinc and asbestos. The majority of the houses were considered 'sound', and about 25% out of living quarters were considered "deteriorating, dilapidating". However, about 60% of the houses were more than 20 years old. About a third of the quarters had their own piped-water but only about a fifth had their own wells or pumps, while the rest shared such facilities. In the case of electricity, about two-third had such an amenity. About half of the quarters were without proper toilet facilities.

Labour Force and Employment

In Kedai Buluh, as already stated, little more than half of the population was in the age group of 0-14 and as such not considered to be in the labour force, while the other half was in the active age-group 15-64. Of the male population in the working age group, about 530 were in the labour force, that is those who either had a job or were willing and capable of accepting one if offered. In the case of female population, however only about 160 of the total 600 in the working age-group were considered as being in the labour force. Thus the male and female participation rates were 83% and 27% respectively. Almost all of the population in the working age-group had been in the locality since their birth, only 7% were born elsewhere. The general educational level of those in the working age group was low :

Only 7% had completed lower secondary, and about 31% had some form of formal education, the bulk of the adult population i.e. 62% had no education at all.

According to the Census only about 4% of the labour force were unemployed. Among the female labour force, the percentage of unemployed was considerably larger, about 20%. Of the economically active population about 60% were engaged in fishing, 20% in commerce, 15% manufacturing and 5% in the services. The overwhelming majority of the labour force was classified as either employees or self-employed. The categories of employers and family workers made up only 8% and 6% respectively. The occupational profile reflects that 60% of the employed were classified as fishermen, 20% as sales workers, while the rest came under other occupational categories.

In Pangkor, about 55% of the population were in the working age-group. At the time of the Census almost all of the 500 male population in the working age-group, could be considered in the labour force as compared to only 50 out of the 420 female population. Thus, the participation rates were closed to 100% for the males and only 12% for the females. Unlike Kedai Buluh, only about 46% of the population in the working age-group were born in the locality. The general educational level in Pangkor was better as compared to Kedai Buluh, about 10% had completed lower secondary, 63% had some form of educational at all. In 1970 the unemployment rate in the male labour force was about 4% while only 3 out of 50 females were unemployed.

Slightly more than half were employed in the fishing industry, about 40% in commerce and services, while the remaining 10% were accounted by manufacturing. About 80% of the employed were either self-employed or employees. Those classified as employers and family workers accounted for 13% and 6% respectively. The occupational pattern reflected that slightly more than half of labour force were fishermen. Other occupational categories such as sales workers, service workers and the production and related workers accounted for 15%, 14% and 19% respectively.

Conclusions

Although nothing definite may be stated on the basis of the data presented by the Population Census, it would appear that Pangkor is a more fortunate fishing community than Kedai Buluh. In the former, housing is of a higher standard in the sense that facilities such as piped-water and electricity are frequent and the houses are less crammed. In Kedai Buluh perhaps the resources may not permit installation of such facilities, they must be spent on expensive construction materials to withstand harder climatic conditions which still do not prevent a rapid deterioration. The active population in Kedai Buluh has comparatively larger inactive population to support. This seems to cause more housewives to seek employment outside the household, but often in vain, while those few in Pangkor who seek gainful employment do not seem to have many difficulties in finding it. Finally, the division of labour would seem to be more pronounced in Pangkor, implying that the income originally generated by fishing activities may be spent on services and goods produced in the community, giving rise to a more diversified economy than that found in Kedai Buluh.

CHAPTER 3 : DESIGN OF THE QUESTIONNAIRE

The general aim of the survey is to collect information which would assist in identifying and monitoring the effects of labour market and employment policies so as to improve the welfare of the fishermen in the two communities of Kedai Buluh and Pangkor. This would require, information describing the mechanisms in the fishermen's labour market influenced by such policies and information on the community's socio-economic conditions against which the efficiency of the policies would be assessed.

The needs for the former type of information would be satisfied by questions elucidating answers on the interrelationships between such factors as :-

- balances in the fishermen's labour market, i.e. surpluses or shortages at the prevailing levels of remuneration;
- relationships between the fishermen as sellers of labour and landed fish to their employers, the boatowners;
- the fishermen's earnings;
- improvements in the input and output of the fishing industry;
- the general labour market situation in the communities;

Through information on these interrelationships it would be possible to explain and anticipate market reactions to policies and assess their potentials in respect of the ultimate goal.

The latter information regarding the socio-economic conditions would be used to assess the applicability of the policies independently of their effects on the labour market. Such information would cover :-

- the available infrastructure in the communities;
- the fishermen's age and educational attainments;
- important secondary economic activities in the two communities;
- the availability of certain skilled manpower;

- the effects of an increased output in fishing and secondary economic activities;
- the effects of an increased skill input to the fishing workforce.

The assessment of any measure in the realm of labour market and employment policies would require information on one or more of the above factors.

Once the above frame work is laid out, the questionnaire is designed so as to utilise other relevant, available information. Such additional information refer mostly to the statistics produced by the Fisheries Department. However, as pointed out in Chapter 1 the survey results should also provide guidance in the effective application of a Key Informants approach in the future. Consequently in the design of the questionnaire the availability of data through which to validate the answers is also considered.

The questions are then chosen to provide possibilities for testing the consistency of the key informants' answers. Finally, they are formulated in such a way that they can be categorised to see, if certain types of question would be more applicable to a Key Informants approach.

The questionnaire is draft within the limits set by the above requirements as reproduced in Appendix C.

CHAPTER 4 : TESTING THE KEY INFORMANTS' ANSWERS

One of the main objectives of the present Key Informants Survey as stated earlier is to develop guidelines for the future application of the Key Informants System as a means of collecting labour market and employment information. This is done by examining the following :-

- a. Whether the key informants' answers refer to reality as perceived or simply to a random choice;
- b. Whether what types of questions would be particularly appropriate for use in a Key Informants approach;
- c. The key informants' socio-economic background and the quality of their answers.

A. HOW DO THE KEY INFORMANTS CHOOSE THE ANSWERS?

In view of the fact that the Key Informants approach relies on the perceptions of the key informants, it is therefore necessary to reduce the impact of such subjective judgements. There are two alternative approaches as to how key informants should be interviewed :-

- (i) Unstructured approach, where it is left to the key informant to speak his mind and for the interviewer to assess and select what is considered to be appropriate. (This would require that the interviewer is knowledgeable of the context in which the answers given would be relevant.)
- (ii) Structured approach where it is left to the key informant to select his answers from a given of set alternatives. This required knowing the precise use of the answers and formulating the questions accordingly. The interviewers would have to be conscientious but not particularly knowledgeable.

The former approach would be useful for social science research projects aimed at testing hypotheses. The latter would be more applicable in situation where research is aimed at identifying current position or evaluating programmes with a view of formulating appropriate

policy measures. The latter approach was almost exclusively used in the survey presented here, although it has some inherent drawbacks. There is the risk that a key informant, although carefully selected, does not possess the knowledge of the community presumed on the basis of his occupation or position. He may choose at random among the alternative answers as presented to him. The prevalence of this drawback need to be examined and an attempt towards this has been made as described below.

Consistency tests

There were four tests applied to examine whether the key informants gave consistent factual, qualitative or quantitative information, and also to examine whether the key informants' opinions reflected their observation of facts or their inherent attitudes. Two tests were applied to the former :

Test 1

Question 1(a): What is the main source of livelihood for most of the households in this community?

Fishing	1
Fish processing	2
Farming (other than coconut)	3
Coconut Farming/Coconut-based industries	4
Cottage Industries (including batik, kain songkit, and silverware)	5
Boat-building	6
Retail trade	7
Repair of boats and fishing gear	8
Others (Please specify)	9
Don't know	0

Question 2 : What proportion of all the households in the community depends on fishing as their main source of income?

- $\frac{1}{2}$	1	$\frac{1}{2}$	3
About $\frac{1}{2}$	2	Don't know	0

Test : In question 1(a) if the key informant must choose fishing, he must choose more than half or about half in question 2.

Test 2

Question 11(a): If married, what is the most common family size?
(A family is the parents and their children)

2-3 1 7 and above 3
4-6 2 Don't know 0

Question 11(b): How many dependants does the majority of the
families have?

None 1 3-5 3
1-2 2 6 and above 4
Don't know 0

Test : Number of dependants should not be smaller than the size
of family.

In both the tests, the majority of answers were consistent.

Two tests the following questions were selected :-

Test 3

Question 4(a)iii: In the past 3 months has there been enough people,
with sufficient experience to be employed, to go
fishing?

Fishing crew Too few 1 Enough 2
More than required 3

Question 20: ~~During~~ the past quarter, were there many residents who
tried, but could not find work through which they could
earn an income in cash or kind?

Many could not find work 1
Some could not find work 2
Almost all could find work 3
Don't know 0

Test : If alternative "too few" was chosen in question 4(a)iii,
than the alternative "many could not find work" in question
20 should not be chosen.

Test 4

Question 4(a)iii: As above

Question 18: Generally what is the labour utilization in terms of number of men per boat? (alternative combinations of types of fishing and boat sizes stated. Information on the optimal number of men per boat in each combination was obtained from independant sources).

Test : Those key informants who indicate actual crew sizes larger than optimal should not select the alternative that they were too few fishermen; similarly while those who selected the alternative that crews smaller than optimal should not subsequently select the alternative that there were too many fishermen.

In both of the tests 3 and 4, the majority of the applicable answers were consistent.

Thus, the tests indicate that the key informants did not select answer alternatives at random or were subjective in their choice of answers. The above question may also be examined by comparing the distribution of answers actually obtained with that of answer alternatives chosen at random. Such a comparison is made in Table 1 in the Appendix. It is obvious, for most question the two distribution differ quite significantly. Therefore, it is reasonable to assume that in general the key informants choose among the alternatives to the best of their knowledge.

B. ASSESSING THE APPLICABILITY OF THE QUESTIONS IN A KEY INFORMANTS APPROACH

In the following section, an attempt is made to examine the types of questions likely to evoke answers which are appropriate in a Key Informants approach.

To the extent possible, control information on the answers to the questions is obtained. Such questions and their control information are identified as presented in Appendix A, Table 2. It will be seen that for some questions there is a wide range of "right" answer codes. This is determined by the precision of the available control information. Control information is obtained for only part of the questions. In Kedai Buluh 55% of the said questions fetch predominantly right (R) answers, about 30% are a blend (B) of right and wrong answers and only 15% mostly wrong (W) answers. In Pangkor the result is not much different from that in Kedai Buluh, i.e. 80% right, 15% with a blend of right and wrong, and 5% wrong answers. The difference is more apparent than real, in the sense that the control information is more applicable to Pangkor than to Kedai Buluh. The majority of questions with right answers would by itself indicate that the use of key informants are encouraging. However this result must be qualified.

The questions may be grouped according to the three following types of answers :-

- a. Statements describing fact which can be observed at the time of interview;
- b. Statements indicating an assessment of facts involving an integration of pieces of information through which salient features in the community are identified;
- c. Statements indicating the key informants' opinions.

In Table 2 the questions have been identified by the above headings (a-c). It will be seen that about 70% of the questions fall under the heading of (a), about 20% under (b), while only 10% maybe classified under (c). For each question the answers have been classified: Right, Wrong, Don't know (DK). From the table it is apparent that the chances of evoking a right answer to an a-question

is larger than to a b-question, while the chances of getting right answers to c-questions are lower than the other two categories. It is also apparent that very few of the questions fetch the answers "Don't know". It would have been expected that where wrong answers are frequent, there would be a large proportion of "Don't know" answers. The survey results indicate that this is not so. It cannot be expected that the key informants openly reveals an ignorance. It may be assumed that the willingness on the part of the key informants to provide information overrides considerations as to whether or not they actually possess it.

Thus, while it would be relatively easy to select a key informant to give reliable information regarding facts which can be observed, much more cautions must be applied when it comes to integration of facts. Finally, it would appear that to rely on the 'key informants' opinions could quite often proved misleading. Below it is examined if these conclusions may be explained through the key informants' inclination to refer to their own situation and extrapolate it to the community as a whole, and thereby giving biased answers.

Tendency of the Key Informants to Apply Their Own Personal Experience

There are strong indications that the key informants tend to assume that what they have experienced personally or through their relatives and friends has a general validity and is applicable to the community. This refers to both the (a) and (b) categories of the questions. In questions 9 (1) - (9) the key informants are asked to state the activities in which the majority of the fishermen are engaged during the monsoon period. The key informants are asked to state 'yes' or 'no' to a range of activities. In Kedai Buluh none of the activities fetches a clear majority of 'yes' or 'no' answers, and in Pangkor, where the monsoon period is not nearly as pronounced only some of the activities do. Furthermore, in both places the answers change at different time of enumeration.

In questions 17 and 19 (a) and (b) the key informants are asked of a fisherman's average monthly earnings and his weekly hours at sea and of work ashore. If the key informants had some ideas of the actual general levels, it might have been expected that the

majority would choose the same answer alternative. However it does not appear that there is any such coincidence. The great variety of answers would suggest that each key informant has applied his own and may be often limited personal experience when selecting among the answer alternatives.

However, it may still be observed that some of the questions make the key informants select one and the same answer alternative. This is for instance the case of question 1(a), asking for the main source of livelihood in the community; question 7 the race of the majority of fisherman and question 10 their marital status, etc. Probably, there is no variation in the answer alternatives chosen because all the key informants have the same personal experience.

The tendency of referring to personal experience when describing the community as a whole makes the individual key informants indicate changes over period of time in matters which could hardly change for the community. In question 1(b) (not tabulated) the key informants are asked to name not more than three economic activities apart from fishing which are important to the community. Only very few of the key informants indicate the same pattern through all the 4 survey rounds. Obviously, what they deem important changes.

In question 12 the key informants are asked to indicate the employment status of the fishermen. The relationships between the boat owners and the fishermen do not change frequently. But still in Kedai Buluh most of the key informants change their statements from one round to another.

It is unreasonable to assume that the educational attainments prevalent in a age group may change over a short period of time. In question 13 however all the key informants in Kedai Buluh and most of those in Pangkor indicate different educational levels at each quarter in respect of certain age groups.

Finally, in question 16 the key informants are asked to indicate which of the four different manpower groups usually perform work in five different trades. In respect of the trades where no single group may be expected to dominate, the answers frequently changes

from one quarter to another, but repetition in the statements are frequent when a predominance could be expected.

A Key Informants approach will often be used to acquire information on directions or changes in directions. For instance, the key informants of this survey are asked, in general :-

- question 3(a) the amount of fish caught;
- question 3(b) the fishermen's earnings;
- question 4(b) the number of boats going out fishing;

had increased, remained unchanged or gone down.

Again, in Table 1 the distribution of answer alternatives chosen indicates that also in respect of such questions probably the personal experience plays a considerable role when the alternative is chosen.

The Tendency among the Key Informants to Give Biased Statements

A number of the questions directed to certain groups of key informants are expected to evoke biased answers. In Table 3 Appendix A the relevant questions have been selected and the answers recorded in respect of these group.

The first of the said questions 3(a) requests the key informants to assess for a 12 month period if the amount of fish landed: went down, remained unchanged or went up. Boat owners and fishermen would tend to underrate for the purpose of tax reduction or subsidy. In the twelve month periods for which control information is available in Kedai Buluh, both fishermen and boat owners underrate the landings. The qualified crew members such as chiefs of crew and in particular the pilots/helmsmen provide more reliable estimates. The merchants (wholesaler, fishmonger, sundry shop owner) in the community seem to be badly informed. Those outside the community such as the relevant administrators do not provide better information.

In Pangkor, during both the twelve month periods the amount of fish landed actually go down and most of the key informants report accordingly. Apparently the correct information may be more readily be given if it is in accordance with the key informants bias. However, of the relevant administrators only one chose the right answer for only one of the periods.

In question 4(b) the key informants are requested to indicate the number of boats going out fishing during each of the 4 quarters covered by the survey. It can be established, in Kedai Buiuh during the 3rd quarter of 1978 (1st survey round) the number of boats increase gradually. In the 4th quarter, (2nd survey round) it decreases drastically, but during the 3rd survey round it increases again. In the 4th survey round (2nd quarter of 1979) however there is a slight decrease. For some reason the boat owners never indicate a decrease, but rather an increase or sometimes 'no change'. Only 5 or 12.5% of the fishermen report a decrease when actually the number of boats going out fishing decrease by 65%. Mostly they report as the boat owners do, with a somewhat greater preference for "remained unchanged". The apparent reluctance to indicate a decrease may possibly be explained by tax and subsidy considerations. The qualified crew members, pilots and chiefs of crew show great affinity for the alternative "remained unchanged". The administrators only occasionally provide the correct answers as they are not in constant contact with the community.

In Pangkor the number of boats going out fishing decreases during July-September 1978, but almost all the key informants declare either an increase or no change. In the following quarter, where there was also a decrease though marginal, most of the key informants choose the correct answer alternative. They are also right in the following quarter when the number remain unchanged. Only one of the administrators choose the right answer in the first quarter when almost all the other key informants are wrong. In the second quarter there seems to be an overreaction to a slight decrease. This is possibly due to a drastic decrease in the amount and quality of fish caught which is reflected in the fishermen's earnings. Possibly the key informants own experiences lead to over-estimate of the decrease in the number of boats. But generally in Pangkor where the fishing community is more affluent than that in Kedai Buluh the explanations of biased statements as offered for Kedai Buluh are less applicable.

Due to the seasonal variations in fishing during the 3rd and the 4th quarters of the year, the employment opportunities tend to decrease and reach low level in December/January. Then the situation improves during the following two quarters of the next calendar year.

In question 5(c) the key informants are asked: Were there has been an inflow of workers from other areas during the past 3 months. Although no significant inflow takes place in any of the 4 quarters in either of the localities, there is a tendency among the key informants living in the communities, in particular the fishermen, to declare that such an inflow has taken place when the fishing is bad and deny it when the fishing is good.

A series of questions, 14(a)(i) - 14(d)(ii), were formulated to examine if an increased skill input in respect of divers, pilots/helmsmen and enginemen would have positive effects. The questions may be accused of "leading" to the choice of a particular alternative. The answers to those of the questions for which control information could be obtained and which might be suspected to be biased have been tabulated in Table 3 for selected occupational categories of key informants.

The key informants in Pangkor would seem to be more influenced by the lead in the questions than being biased. This is not the case in Kedai Buiuh where in particular the boat owners and fishermen, tend to favour more and better divers when fishing is bad than when it is good. In particular the fishermen are critical of the helmsmen's abilities to lay down a course, although less so under normal weather conditions. They together with the boat owners are also frequently dissatisfied with the enginemen's abilities. The pilots/helmsmen appear to be more thoughtful in their answers as they do not think that an increased skill input in diving would have any effect. In the 3rd quarter of the calendar year when the fishermen's dissatisfaction with the pilots/helmsmen is only moderate. When it comes to the enginemen the pilots/helmsmen would seem to voice general satisfaction all through the 4 quarters unlike the boat owners and fishermen.

Thus, the survey shows that among the key informants chosen, there are some with varying tendency to deliver biased statements depending on the occupations and other factors.

Questions Requesting the Key Informants' Opinions

Three sets of questions - question 4, 14 and 15 - in the questionnaire invite the key informants to state their opinions on various issues. The first set asks if there are too few, enough, or

more than required of enginemen, helmsmen, and fishermen. The second set of questions, of the yes/no type, asks if it would make a difference in the amount of fish caught, if the skill input increases in respect of divers, and gear handling, and if the engines are properly handled. Finally in the third set the key informants are placed in a situation to choose whether people would earn the same or more if production increases in a number of different activities. All the answers are tabulated by alternatives chosen in Table 1 (Appendix A).

In the first set of questions there is a tendency among the key informants to choose the noncommittal alternative "enough" or to declare "Don't know". This is inspite of other questions 18 and 20, which indicate that in Kedai Buluh there is a surplus supply at least of fishermen and in Pangkor a scarcity, (Table 4A and 4B in Appendix A). The second set of questions is "leading" and the key informants respond accordingly the "lead" to a large extent. The third set is more neutral in its formulation. Where the key informants may be presumed to have different experiences, a relatively even distribution of answers by alternatives may be observed, and where the key informants may be expected to have the same experience, an uneven distribution appears.

An opinion is usually formed on the basis of a set of assumptions. If a key informant is asked of an opinion without being provided with assumptions on which to base it, as in respect of all the three sets of questions, it appears that he prefers to be uncommitted, follow the 'lead' in the question, or form an opinion based on his assumptions.

Thus, the chances of getting appropriate answers to questions requiring opinion may be slim unless the key informants are told on which basis to form their opinions.

C. THE KEY INFORMANTS' SOCIO-ECONOMIC BACKGROUND AND THE QUALITY OF THEIR ANSWERS

In the present paragraph it is attempted to identify socio-economic factors which influence the quality of the information. It is impossible to include all the relevant factors but only those which are immediately or easily observable to the producer of the information. Those which might only be obtained by a study of the records of the key informants' past or through inquiries are omitted. The following factors include:

1. Occupation
2. Sex
3. Age
4. Race
5. Marital status
6. Highest educational attainment
7. Labour force status, i.e. full-time employed, part-time employed, unemployed, outside labour force
8. Employment status i.e. employer, employee, own account worker, unpaid family worker.

Occupation

This is by far the most important factor through which to explain quality differences in the key informants's answers. The occupation will indicate if the key informant is :-

- (i) an indirect observer who may acquire knowledge of the subject matter through records or verbal accounts;
- (ii) an observer, but in immediate contact with many or most of those directly involved, and on a broad range of issues;
- (iii) an observer, but in immediate contact with those directly involved on a few issues only;
- (iv) directly involved in the subject matter;
- (v) directly involved, through a close personal relationship to those directly involved.

In Appendix B the occupational categories applied to the survey are indicated. They may for the major part of the questions be grouped under the above 5 categories as follows :

- (i) District Officer, Local State Assemblyman, Headmaster, Imam, District Health Officer, Fishery Officer, Majuikan Officer, Cooperative Officer, Employment Officer, Penggawa/Penghulu, i.e. the administrators.
- (ii) Village Headman and Traditional Healer.
- (iii) Wholesaler, Fishmonger, Sundry Shop Owner i.e. the merchants in the community.

(iv) Pilot/Helmsman, Boat owner, Gear owner, Diver,
Chief of the Crew, Fisherman.

(v) Wife of fisherman.

In the following it will be shown how this grouping may be used to explain differences in the quality of the answers. Only those questions are included for which control information is available, which command at least a slight variation in the quality of answers and which may be expected to have the same meaning to all the key informants.

In Table 5, Appendix A the answers to the said questions have been grouped by the above 5 types of key informants and classified as right (R), wrong (W), and "Don't know" (DK). It would appear that the key informants of groups (ii), (iii) and (iv) generally have provided better information than those in groups (i) and (v). In the former groups the relative proportion of correct answers is higher than in the latter. In group (i) in both Kedai Buluh and Pangkor the answer alternative "Don't know" is frequent. In Pangkor group (v) seems to provide better information than in Kedai Buluh. Generally, it would appear that the closer a key informant's relation is to the subject matter, the greater the chance that he may provide applicable information. That is to say, there is a good chance that the information he provides is correct, if he plays an active role in the matter on which information is sought and/or if he is in a position to many direct observations on a large scale, ie. his personal experience is based on large segments of the community. However, this conclusion needs some qualification. From the Table it is apparent that in particular questions 11(a) and 13(i) fetch wrong answers. If the two questions are disregarded, the proportion of right answers increases for all the categories of key informants. In both questions the key informants are asked to indicate the applicable grouping in respect of families size and educational attainments. It is left to the key informants to select the right grouping out of those prescribed. If these grouping do not happen to be in accordance with the individual key informants experience, the questions must evoke wrong answers. Probably the answers would have been of a higher quality of instead, the key informants had been confronted with different sets of groupings (distributions) from which to select.

Other Socio-Economic Factors

In the following it is examined if it is possible to improve the efficiency of the selection process by considering the other socio-economic factors namely sex, age, race, marital status, highest educational attainment, labour force status and employment status.

In Table 6, Appendix A the answers to three groups questions have been tabulated: a) those requesting information on orders of magnitude, b) those requesting qualitative information; and c) those requesting opinions*. For each group of questions it is examined if the factors of: Age, Educational Attainment, Labour Force status and Employment status influence the quality of the answers. Not all the factors are included in the analysis. In respect of race, sex and marital status, the uniformity among the key informants prevents an examination. Generally, the Table does not make it safe to assume that there exist such relationships between the 4 selected factors which could be applied to screen high and low quality key informants in advance.

However, in the group of c-questions the breakdown of the labour force status indicates significantly different proportions of Right, Wrong and DK-answers. The part-time employed workers in both places and the unemployed as well as and those outside the labour force in Kedai Buluh more often provide the right answer than the full time workers. The questions refer mainly to the effect of additional skill input of divers, pilots, and enginemen and if people engaged in fishing could earn more by increasing the amount and quality of fish caught. As shown, from the key informants in Kedai Buluh the questions invite biased answers, in particular from those actively engaged in fishing because they would not lose, but might gain from an increased skill input. Their answers are frequently deemed wrong. Those unemployed and part-time employed may not have the same interest in additional skill input, neither would those outside the labour force. Being less biased their answers are frequently deemed right. This explanation cannot be verified. It would require an examination of coincidences between change in labour force status and change in answer. But changes in labour force status are rare.

*For the purpose of assessing the influence of the key informants' socio-economic background on the quality of their answers the above breakdown of the questions is considered more expedient than that on page 21.

In Pangkor the opposite is the case, but paradoxically for the same reason. All can find work in Pangkor, the applied distinction between part-time and full-time employment will under such circumstances reflect the key informants' eagerness to increase their earnings rather than indicate their actual number of working hours. Consequently the majority of the key informants declare themselves part-time workers although based on an ordinary definition of the concept, they would probably have been classified as full-time employed. Those eager to increase their earnings i.e. the part-time employed will be more inclined to deliver biased statements as indicated above than the full-time workers. Therefore, the differences in the percentage distributions probably reflects the key informants' inclination to provide biased statements.

It must be concluded, the survey has failed to prove that any of the four socio-economic factors is related to the qualities of a key informant. It could be argued that certain combinations of the factors might be related to the qualities. This is quite possible, but the number of key informants in this test survey is too small for verification or rejection of such a hypothesis.

The key informants for this test survey are selected exclusively on the basis of a presumed relationship between their occupation and the subject matter covered in the survey. They volunteered to participate in the survey after a brief explanation of its purpose. They are interviewed by well educated enumerators who are trained for a period 3-4 days, but no effort is made to develop a better relationship between the enumerators and the key informants. Perhaps under more intensive survey preparations other conclusions might have been made. For instance the indirect observers or administrators might have provided better information on subjects relating to their posts. In that respect this survey only shows that even if there are opportunities of making observations they are not always used. Possibly in the case of intensive survey preparations some of the socio-economic factors of key informants might prove to be valuable indicators of dedication and ability to integrate and assess fragmentary pieces of information.

CHAPTER 5 : AN ASSESSMENT OF VARIOUS LABOUR MARKET
AND EMPLOYMENT POLICIES

One of the purposes of this survey is to examine if the key informants' statements are of such a quality that they may be used, as a basis for identifying labour market and employment policies which could enhance the fishermen's welfare. In this context, the salient features of the two communities including their labour markets are described based on the key informants' statements. An assessment is made of the possible policy measures such as :-

- Increasing capital and skill input in fishing.
- Reinforcing secondary economic activities in the community.
- Attracting new industries to the area.
- Facilitating the fishermen's access to alternative job opportunities.
- Encouraging permanent emigration.

A. KEDAI BULUH

The Economy of the Community and its Labour Market

The key informants indicate that more than half of the households depend on fishing as their main source of income. The other important activities such as fishprocessing and boat and gear repair, may be regarded as supplementary activities. The only other activity which may not be directly linked to fishing, but still of some significance is cottage industries, i.e. batik, songket and silverware. There are no indications that the economy has become more diversified since 1970. Masonry and carpentry works are also undertaken by local residents, but for general electrical and mechanical work and to some extent boatbuilding, the key informants' statements indicate that the community relies on specialists from outside the village. The infrastructure seems to have developed since 1970; electricity is now available but most households still lack piped water inside the house; most people have access to public telephone. There are various means of public transport such as buses, taxis and trishaws which are considered adequate. The general labour market is reported depressed in the sense that many cannot find work and this situation may be more pronounced during the monsoon period.

According to the statistics from the Fisheries Department, it appears that in the past the amount of fish landed in the district of Kota Bahru has shown great fluctuations over the years. From 1976 to 1977 the amount landed decreased by 60% from 11,041 to 4,042 tonnes. In 1978 it regained its previous level reaching 11,663 tonnes. On the basis of the key informants' statements in 1979 it may be expected to have increased further or at least remained as in 1978. The steady increase in the catch has coincided with the input of both manpower, boats and modern equipments. The increase in manpower between 1976 to 1977 was a moderate scale, the number of fishermen working in licensed boats increased by 13% from 3,444 - 3,847. However, during 1977-78 the number of fishermen rose by 21% to 4,655; in Kota Baharu district the number of boats increased modestly from 794 to 802 during 1976-77, with the number of boats with outboard increasing and those of inboard motors decreasing. For the state of Kelantan as a whole, from 1977-79 the number of outboard powered boats increased by 33%, while the number of inboard-powered boats increased by about 11%. The key informants' statements do not indicate that this development ceased in the first 6 months of 1979. The input of gear as a whole would appear to have decreased. However, this only reflects a switch from the less to the more modern fishing methods, i.e. from traps and traditional methods to gill/drift and seine nets. According to the key informants, this trend might have continued during the first 6 month of 1979.

The 1976 Agricultural Census estimated the median monthly gross household income for Malay fishermen of about \$160.00. In the survey period the key informants in Kedai Buluh rated the fishermen's monthly earnings in the income brackets of M\$100 - 149 or \$150 - 199, depending on the season. Considering price increases, this means that in real terms the fishermen might have become poorer. This is plausible considering that the input of labour and capital have increased but with no significant increase in the amount of fish caught. To examine if this trend may be reversed through the above policies a review of the fishermen's labour market in Kedai Buluh is stated.

Those who provide an input to the fishing industry such as labour, skill, capital, in terms of boat, engine, nets etc. receive a predetermined share of a catch the amount of which is variable. The share of labour is lower than that of labour and capital combined, or even of a specialised skill. On the east coast, the capital input may be provided by many different owners, all of whom may be member of the

crew. But the reverse may also be observed, i.e. one person provides all the capital input and through his crew captain, hires the fishermen and the skilled crew such as helmsmen, enginemen, net handlers etc. In such cases the fishermen who only provide their labour will often be obliged to sell their share of the catch at present prices to the person who provides the capital.

According to the key informants those who only provide labour make up the majority of the fishermen in Kedai Buluh. The crew size could be reduced in all type of fishing without any significant effect on the amount of fish caught. From the key informants' statement, it appears that the fishermen are mostly in the age group 25-45. According to 1970 Census more than half of the population were in age 14 and below. It implies the new entrance to labour market during 1978-79 has chosen to earn an income outside fishing to a larger extent than before.

The key informants indicate that practically all those in the age 40 and above are without formal education. Those in the age-group 25-35 have some primary education, while most of those in younger age-group have primary or lower secondary education.

Most of the fishermen have four or more children. However, the majority of the households have at least six dependents including wife and children. The fishermen work long hours. The key informants estimate that they stay at sea about 60 hours a week, and while ashore they spend about 20 hours a week on repairs. These weekly working hours are reduced during the monsoon period especially in December which is the peak of the monsoon season when the sea becomes rough. According to the key informants, this may force the fishermen into idleness or many will temporarily emigrate in search of other employment elsewhere.

Policies:

1. Increasing Capital Input and Skills to the Fishing Industry

In Kedai Buluh the aim of such policies would be to reduce unemployment and under employment, i.e. decrease the crew and thereby increase the fishermen's share of the catch. At present various support schemes are implemented. The individual fisherman has

relatively easy access to finance to acquire equipment for fishing and many also participate in vocational training as related to the industry. Such measures would be successful if there is an increase on the value of the catch, through the combined effect of changes in volume and price. This would induce an increase in employment, reducing the surplus of fishermen as possibly increase their share of the catch. If an increase in the value of the catch does not materialise following the increased input, but remains constant or even decline the capital owners will get a larger share at the expense of the fishermen.

In Kedai Buluh many cannot find work even at the peak of the fishing season and there is a surplus of labour throughout the year. In the past the catch has remained almost constant except for 1977 when it was very low even though the capital input has increased. Under such circumstances the increased input has probably helped those who make use of the easy terms to acquire nets, boats engines etc., but to achieve a significant improvement in the employment situation through such means would be extremely difficult, if at all possible, and resource demanding.

The same line of reasoning applies to an increased skill input. Those who acquire the skills would profit, because their share gets larger due to their skill input, but if no increase in the value of the catch takes place it will be at the expense of those who did not acquire any skills. But the employers will stand to gain, as the supply of the skills will increase, probably causing a decrease in their price, i.e. the share allocated to remunerate the skill input. However according to the key informants in Kedai Buluh skills in engine handling, navigations and net handling would not seem to be extremely scarce, possibly an increased input may only have marginal effects.

2. Reinforcing Secondary Economic Activities

Fish processing is an important activity in Kedai Buluh. If some of the processing now done elsewhere is done in the community, at least more income would be generated and a reduction in the unemployment and under employment might be achieved. It would probably imply an expansion of the existing processing which require little or no equipment, with labour being the main input. It might be done through development organisations offering fixed minimum prices for the product, and organising the collection of the products. The key informants estimated that an increased production would generate additional incomes. The

problem would be for the fishermen to acquire the fish as those who are entitled to a share of the catch only through their labour, may be obliged to sell it to the boat owner at preset prices. If they do not, they run the risk of being refused employment in the future. Having no job alternatives the chances are that the fishermen will rather forego their opportunity of extra earnings through fish processing than jeopardizing their jobs as fishermen in a labour surplus community.

Cottage industries were also considered favourably by the key informants. A reinforcement may again have to be done through development agencies offering credit facilities for the purchase of raw materials and fixed minimum prices for the end-products to be marketed by the organisation.

As noted earlier, from the key informants' statements it may be concluded that in Kedai Buluh non-resident specialists undertake work in such trades as electrical and mechanical and to some extent also in boat building. If the residents themselves performed such work the income thus generated would remain in the community and would increase the community welfare. The services would probably be cheaper for those buying them, and those selling them would have earned an extra income. To develop such skills would require training of those willing, thus enabling them to undertake simple jobs for which the non-residents are hired at present. Those in the community who would take up such specialisation would probably have to do it part-time. One of the reasons for the use of specialists from outside the community is probably that the demand is less than what is required of a full time specialist. Such training measures could bring some relief to the community, but would not reduce the labour surplus significantly.

3. Attracting New Industries

In several parts of Malaysia, development of new industries has overcome a labour surplus situation. It has mostly been achieved in the urban areas, probably because of the availability of the necessary infrastructure e.g. industrial estates with water and power supplies and sewerage facilities. The key informants' statements do not indicate that Kedai Buluh can offer such attraction. Providing them through an investment programme in the expectation that they will

attract new industries may not be the most economical way to reduce under employment and unemployment in the locality. Light industries may be attracted even if only the basic facilities are available. The place is, according to the key informants, well served with transport facilities as it is situated close to the town of Kota Baharu.

In Malaysia labour intensive light industries are often staffed by female workers. In 1970, according to the Population Census most of the female population wanted to work outside the household but has no opportunity to do so. The key informants' description of the present labour market does not indicate a change. Probably there is still an unemployed female labour supply. If offered gainful employment outside the household they might add to the fishermen's meagre income. However, no real improvement in the employment situation in the community would have been achieved, as there would still be a surplus of male labour. This would require industries with a heavy demand for male labourers, which require a well developed infrastructure.

4. Facilitating the Fishermen's Access to Alternative Job Opportunities

Kelantan has ambitious development programmes which include infrastructure development. According to UNDP/World Bank Study, funds and credit facilities do not pose as constraints while the projects proposed are technically simple. Under such circumstances through the execution of infrastructure projects alternative job opportunities for the fishermen can be made available.

The government agencies responsible for the execution of the projects may often find it expedient to undertake such works through contractors already known to them and in whom they have confidence. These contractors may not always be residents in the area where the projects are carried out and they may have to use labour force from other areas. To involve local people required that planning for the execution of the projects, takes into account the modest skill levels in the labour force. These extra efforts in utilising the local manpower resources may be regarded as a means towards improving the welfare of the fishermen. The labour absorptive capacity of the projects might, apart from reducing unemployment, improves the fishermen's earning prospects.

Although development projects may not be executed in the fishing village, the fishermen can still benefit from additional jobs created. According to the key informants' statements, fishermen migrate in search of job during the monsoon season and return when the opportunities for fishing improved. Thus, the fishermen constitute a mobile labour force responding to job offers outside their area. However a positive response to such job offers would probably require incentive such as organised transport, accommodation and reasonable wage.

5. Resettlement

A number of smallholder schemes in agriculture operate successfully in Malaysia which also recruit fishermen as settlers. There is no convincing evidence that the change in lifestyle poses obstacles which cannot be overcome by fishermen. However, the opportunities are limited and cannot exclusively be offered to fishermen. Furthermore, if only those who have a potential to become successful settlers move out of that community, probably it will be deprived of its more effective and younger workforce. Resettlement may benefit a few but is hardly applicable as a measure through which to improve the living conditions in the community as a whole.

Conclusion

The key informants' statements and other statistical material have identified existing structures in the community and a labour surplus situation, the latter causing underemployment and low earnings among the fishermen.

The findings suggest that an improvement in the fishermen's situation might be achieved by involving them as workers in the infrastructure development projects in Kelantan. This might imply extra efforts in the planning and management of the projects so as to enhance the participation of the local labour. This may be considered as immediate measure to overcome the problems of unemployment as well as underemployment. The measure compares favourably to other alternatives such as to increase capital investments in fishing, supporting secondary economic activities in the community and attracting new industries.

B. PANGKOR

The Economy of the Community and its Labour Market

The Key Informants Survey indicates that Pangkor has remained a fishing community throughout the period 1970-79. More than half of the households' main source of livelihood is still based on fishing. The other important activities indicated by the key informants are those of fish processing, boat building and repair of gear and boats, while cottage industries are insignificant. Mostly local craftsmen are engaged in the construction and repair trades such as masonry, carpentry, mechanical and electrical trades and boat building. When comparing the key informants' statements with the information in the Population Census 1970, the division of labour in the community appears to be more diversified.

The key informants' statements indicate that all public amenities such as piped water, electricity, health clinics, schools, telephones and the public transport system are adequate.

The general labour market throughout the year is characterised by the key informants' statement "Almost all could find work". There is no significant level of unemployment or underemployment.

The Fisheries Department's statistics show that during 1976 to 1977 the amount of fish landed in the district of Dindings in which Pangkor is located, increased by about 25% from 50,800 to 63,700 tonnes. During 1977-1978 the tonnage increased by 18% to 75,000 tonnes. This increase in catch has occurred while the work force in fishing remained almost constant throughout the period of 1976-1978. During the early part of 1979, the key informants indicate either a continued increase or a stagnation.

For the period of 1976-1977 the number of licensed boats increased from 1,341 to 1,484 boats, i.e. an increase of 11%. The number of boats with inboard motors increased from 1,287 to 1,420, i.e. by 15%, while those with outboard motors and those non-powered actually dropped. During 1977-1978, the number of boats continued to increase especially the non-powered boats and those with outboard motors. The key informants' statements do not indicate a decrease in the number of licensed boats during the early part of 1979. The statistics indicate

that the number of trawl nets remained fairly constant during the period of 1976-1978 while there was significant increase in the number of seines and gill/drift nets. The key informants indicate neither a major increase nor a decrease during the early part of 1979.

According to the Census of Agriculture 1977, the median monthly gross household income of the Chinese fishermen was M\$309. The key informants indicate the fishermen's monthly earnings are in the range of M\$150-199 and M\$200 and above, except for an extremely poor catch in the 4th quarter of 1978 during which much lower earnings are indicated. Most of the fishermen indicate their monthly earnings fall between M\$180-M\$220 or a gross household income of about M\$300 in 1979. In spite of a steady increase in the amount of fish caught, a constant workforce and a 35% increase in price, the fishermen's earnings remain almost unchanged.

The fishermen are remunerated through their share of the catch. If they do not own any capital but only provide labour, they sell their share of fish to the boat owner, it is unlikely that they sell it to someone else for it could have effected their employment opportunities as fishermen. Some of the fishermen have entered into joint ownerships, each member owning a share of the capital, they will sell their catch to the highest bidder and share the revenue. However, the majority of the fishermen belong to those who provide only labour.

In Pangkor all types of fishing and boat sizes are used, but the majority used trawl, seines and gill/drift nets. According to key informants crew sizes smaller than optimal are prevalent in trawl fishing particularly with respect to the larger boats. In purseine fishing the middle size boats of 25-50 tonnes have crew sizes larger than optimal, while the larger boats are undermanned. Gill/drift net fishing which is practised almost exclusively from small size boats have optimal or larger than optimal crew sizes.

Most of the fishermen are in the age group 20-40. The fact that most of them are relatively young indicates that the majority of the new entrants into the labour force in Pangkor choose fishing as means of livelihood.

Most of the fishermen of the younger age group i.e. 24 and below, have a primary or lower secondary education, while those in the age group 25-39 have primary education. The fishermen of 40 years and above have no formal or only primary education. The average family size is six. In most cases the wife and children are dependents. Most of the fishermen are at sea 60 hours or more a week throughout the year and furthermore spend 20 hours a week on repairing boats and gear ashore. In Pangkor the monsoon period is not that pronounced to effect the fishermen's activity pattern.

Policies:

1. Increasing Capital Input and Skills to the Fishing Industry

In Pangkor employment level appears satisfactory. However, from 1976-1979 there is no significant increase in earnings in spite of an increase of 50% in catch and 35% in price. The reason may be the fishermen are in a weak bargaining position vis-a-vis the boat owners. The alternative outside fishing may not offer much better earnings, and possibly they are attracted to fishing for non-economic reasons.

The improvements in capital input may result in increased catch. If this can be established, the government support for joint ownerships may improve the fishermen's earnings prospect. This reduces the workforce available to the boat owners, inducing them to offer better remuneration to fishermen. However, as undermanning is frequent, an increase in capital input may cause diminishing returns of the capital invested. This may be counteracted if the joint ownerships also were given government support to acquire shares in the existing stock of boats and other capital. Such a measure also has its drawbacks. The boat owners being in a strong bargaining position will only sell such shares at a high price. The problem of undermanning and the question of who should incur the costs of improving the fishermen's bargaining position, set limits to the effectiveness of such policies.

The argument is also true in the case of increased skill input. The key informants statements do not deny that it may increase the efficiency in fishing and thereby increase the amount of fish caught. However, the boat owners hiring the skills will benefit more since they are in a stronger bargaining position.

Policies to improve capital input and upgrade the skills will benefit the boat owners and fishermen in general. However, the benefit will be more to those who supply the capital input and those who possess greater skills.

2. Reinforcing Secondary Economic Activities

To strengthen their position vis-a-vis the boat owners, the fishermen should be provided with alternative job opportunities offering earnings higher than those obtainable in fishing. These earnings may even have to be significantly higher to enable them to repay debts incurred while working with the boat owners. This could possibly be achieved by setting up fishprocessing plants using male workforce based on the local catch or aquaculture. It should not be left to the individual fishermen to start such venture, as it is too resource demanding and require management skills not possessed by the ordinary fishermen. The venture must be well planned, both the flow of raw materials and market outlets must be secured in advance. Development organisations with the necessary expertise could be given the task to start such venture and to pay wages exceeding the fishermen's earnings'. This may break the boat owners' near monopoly as employers. Pangkor's infrastructure and transport facilities would probably be able to accommodate such an undertaking.

3. Attracting New Industries

This measure if successfully carried out would have the same effects as that discussed above regarding a reinforcement of secondary economic activities, provided the new industries cause a competition among employers for the scarce male labour. However, attracting new industries to Pangkor may not be easy, as other places are more attractive to the industries. Pangkor's drawback would seem to be high transport costs. Both the raw material and the final products require several reloadings. This may not be so important for light industries employing female workers, but for those offering job opportunities to male workers the handling costs may make investors choose other industrial estates where roads and railways provide easy access to raw materials and markets for the final goods.

4. Facilitating the Fishermen's Access to Alternative Opportunities

In Lumut, on the mainland, a major naval base is under construction together with a reinforcement of the local customs department. Once in operation, this will significantly increase the population in Lumut. The additional population will probably cause a rise in demand for personal services in retail trade, transport, repairs etc. As a result new business undertakings may open and existing ones expand requiring additional workers. This may be another source of alternative job opportunities to the fishermen in Pangkor. There are indications that well educated new entrants to the labour market choose jobs in fishing although they are hardly attracted by the earnings in the industry. This may be due to their ignorance of other opportunities on the mainland and their reluctance to be away from the family. With the increased demand for labour in Lumut, earnings there may go up, and the jobs generated may be filled with young workers from Pangkor communicating between Pangkor and Lumut. This may also contribute to the competition among boat owners to hire fishermen. Probably, deliberate efforts must be made to inform about job opportunities. This could be done by the employment service through its local office.

5. Resettlement

It is likely that the educated young fishermen from Pangkor could do well and adjust to conditions in a smallholder scheme, in particular if a significant improvement in earnings is achieved. Considering that the fishermen are in short supply it cannot be precluded that even a slight decrease in their numbers, as caused by such emigration, would make the labour market more competitive. However, the likelihood of such a development would seem remote when it has not been caused already by the present scarcity of labour in the industry.

Conclusion

The key informants' statements supplemented by ordinary statistical data indicate the fishermen's labour market in Pangkor to be in a "monopolistic" position where the fishermen are dictated by the boat owners. However, the fishermen's labour appear to be scarce as the boat owners might increase their catch by increasing the crew size.

The findings indicate that fish processing is an important activity in Pangkor. It may be used to make the fishermen's labour market competitive, if new industries in the activity deliberately offer competitive wages to male workers recruited from the local labour force. The same may probably be achieved by keeping the labour force informed of job opportunities in Lumut. Increasing the capital and skill input in the industry may benefit the fishermen in general but in particular those providing the capital and possessing the skills.

CHAPTER 6 : PROBLEM ENCOUNTERED AND SUGGESTED SOLUTIONS

A key informant is a person selected to provide information of a larger group or a community. An efficient key informant is able to balance and integrate his perceptions of facts. Often the information he provides will be used in the same way as that collected through an ordinary survey. Below, a summary is given of the experience from the present Key Informants Survey.

Generally, the survey indicates that most of the people selected as key informants try to give answers to the best of their knowledge and do not seem to have chosen randomly among the answer alternatives offered. Apparently, they also think that they possess the information required, although this is not always the case.

The questions used in the survey may be grouped as follows:-

- (i) Statements describing facts which can be observed at the time of interview;
- (ii) Statements indicating an assessment of facts involving an integration of pieces of information through which salient features in the community are identified;
- (iii) Statements indicating the key informants' opinions.

The chances of getting a correct answer decrease in descending order from (a)-(c). In each of the three groups of questions, it would be reasonable to believe that the chances of getting a correct answer may be improved, by giving the option of choosing among alternative patterns of characteristics. The present survey predominantly left the key informants only one option to indicate what is the "usual", the general" etc.

There appears to be a tendency among the key informants to indicate their own experience as a general feature of the community. To conceal their ignorance they often select wrong answer alternatives rather than that of "Don't know". This underscores the importance of having effective means of selecting key informants. Each of those selected for the present survey were identified by the 8 characteristics mentioned on page 33.

The survey shows that the most efficient characteristics is that of occupation. Those who operate directly in the communities, although not involved in the actual fishing, such as the merchants, provide high quality of information, comparable to that provided by the community members directly involved in fishing. Those community members such as the village headman and the traditional healer who have frequent contact with the people in the community on a wide range of issues, would answer the questions correctly. The fishermen's wives who are not directly involved in most of the issues and the administrators who have only indirect opportunities to observe do not rate high. There are good chances of selecting knowledgeable key informants from those who are directly involved with the issues. However, to apply that rule will increase the risk of accepting biased statements.

Even if all the above experience is applied to the selection process, there are still dangers involved. Often the key informants would describe matters differently at various points of time although no change has taken place or their answers would wrongly imply a change. This applies to all the occupational groups.

From the above experience it is possible to draw a number of conclusions of how and when to apply a Key Informants approach. As discussed earlier, when the key informant is asked to characterize a community in a certain respect, better information may be obtained if he is given the opportunity to select from alternative patterns. This may apply to a number of issues e.g. the community members' distributions by: age, educational attainment, working hours, income, employment and labour force status etc. Only when the user of the information is certain that almost all the community members fall under the same group in the distribution he may expediently apply questions involving terms as "usual", "generally" "mostly" etc.

When a key informant is asked to give an opinion it is essential that it fits the context in which it is to be used. Consequently it is necessary to identify the assumptions on which to base the opinion. If this is not done, at least it must be ascertained which basis the key informants have used. This will make it possible later to decide whether

or not to use the opinion. However there may still be a substantial danger of collecting low quality information through opinionated questions. The best solution would probably be to avoid them altogether. This may be done by asking questions the answers to which would provide the same information as that sought directly through the key informants' opinions.

There are also solutions to the problem of biased statements, candidates may be prescreened. There may be past records on the issues. Those who are able to inform adequately about the past may be selected. If there is still a danger of biased statements indirect observers may be selected once it has been ascertained that the way they carry out their duties makes it reasonable to assume that they are efficient key informants. Furthermore, control information and question may be applied extensively. However, above all, the key informants should be given motivation by explaining how the information will be used, it might even involve some training of the key informants.

From the above it follows that both the preparations of questions and the selection of key informants require thorough and meticulous planning, which might even go beyond that required for an orthodox survey. For instance the training of the enumerators would probably have to be more thorough to ensure that the questions are clearly put forward so as to avoid all possibilities of misunderstanding. A special relationship between the key informant and the interviewer must be built up. The Key Informants approach is not an emergency solution in data collection. The extraordinary requirements to the planning would indicate that it is most economically used for repetitive studies, e.g. monitoring on-going development, effects of development programme etc.

CHAPTER 7 : SUMMARY AND CONCLUSIONS

Social research for policy identification and assessment usually follows the four stages below :-

- (i) identification of the pattern of relationships amenable to policy intervention. In this survey it is the relationship between the fishermen and their employers, i.e. the boat owners;
- (ii) provision of a quantitative empirical data base indicating the extent or the seriousness of the problems. In the context of this survey, it is the fishermen's earnings in relation to the catch and the inputs of labour, skills and capital;
- (iii) providing a base for the assessment of policies and programmes under given circumstances. In the survey this stage is represented by attempts to identify the communities' infrastructure, their secondary economic activities, the age distribution of the fishermen, their educational attainments, etc; and
- (iv) monitoring the effects of the policies implemented. The effects of the employment and labour market policies on the fishermen's welfare might be monitored by information on their earnings, differentials between actual and optimal crew sizes and developments in the general employment situation in the community.

A Key Informants approach would seem to be increasingly applicable as one moves from stage 1 to 4.

Stage 1. An identification of comprehensive relationships between the fishermen and their employers will have to be based on indepth socio-logical studies which are available in Malaysia. It is however possible to develop some understanding of the relationships by means of the Key Informants approach. It may also be possible to make use of key informants for verification. For instance, the key informants in this survey were asked to identify the fishermen's employment status in order to verify their relationships to the boat owners.

Stage 2. The quantification of information cannot satisfactorily be done through key informants. The survey indicates that great numerical differences may be expected between key informants' statements. However, if the need is for broad ranges key informants may be able to provide adequate information. Thus, in this survey most of them have indicated the correct range of the fishermen's earnings, their hours of work, etc.

Stage 3. An assessment of policies as to their effectiveness often requires less precise information. This will be the case when the main purpose of the assessment is to exclude consideration of certain policies. In such a situation a Key Informants approach may be appropriate. For instance, it is quite obvious from the key informants' statements that the infrastructure in Kedai Buluh may not attract sophisticated and capital intensive industry. However, much more precise information is needed to assess the possibilities of reducing unemployment through developing infrastructure project.

Stage 4. To monitor the effects of the policies implemented can be done adequately by means of key informants' statements. In this survey the information :

- (i) differentials between optimal and actual crew sizes;
- (ii) general levels of employment in the communities; and
- (iii) broad distributions of fishermen by earnings;

would be reliable indicators of the effects of changes in the labour supply and in the fishermen's bargaining position.

Once it is established that a Key Informants approach is applicable, the choice between that and an ordinary survey must be based on the economic of the two approaches and how fast the data must be made available to the users. The experience obtained through the test survey in these respects is limited, although it is possible to make certain conclusions. In an ordinary mail or enumerator-conducted survey the emphasis is on determining the sample size and the formulation of a questionnaire. The selection and motivation of the key informants. In a Key Informants approach the emphasis will be on the identification of the precise used of the information, and the training of enumerators to establish the necessary common frame of reference. This difference in emphasis would require

greater input in the planning stage for a Key Informants approach.

Having planned the survey, the information from the Key Informants approach will require little processing and the results can be made available in a relatively short time.

An organisation responsible for the execution of policies will often have to monitor their effects over a long period of time, through several survey rounds implying the costs per round could quite modest. The organisation may not always have the statistical expertise to decide on sample design, questionnaire, and to process and analyse the data. Shortage of such expertise would cause delays in survey execution. In conclusion, a Key Informants approach has its definite advantages in the monitoring phase of policy implementation.

Date: April, 1981

Manpower Department,
Ministry of Labour and Manpower,
Kuala Lumpur.

The Key Informants Answers to the Survey Questions by Chosen Alternatives

KEDAI BULUH

Table 1

Question no. distribution of answers by alternatives	Survey Round Alternatives																												
	1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979										
	0	1	2	3	4	5	6	0'	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
1(a)	(a)	-	100	-	-	-	-	1	99	-	-	-	-	-	1	99	-	-	-	-	-	1	99	-	-	-	-	-	
	(r)										11						11								11				
2	(a)	3	-	2	95	-	-	-	1	1	1	97	-	-	-	2	-	-	98	-	-	-	3	-	-	97	-	-	-
	(r)				32						33						32						32						
3(a)	(a)	7	36	36	21	-	-	-	6	29	32	33	-	-	-	12	1	83	4	-	-	-	14	48	19	19	-	-	-
	(r)				31						31						29						28						
3(b)	(a)	8	34	34	24	-	-	-	5	28	33	34	-	-	-	12	12	57	19	-	-	-	12	48	38	2	-	-	-
	(r)			30						31						29					29								
3(c)	(a)	1	93	2	4	-	-	-	1	94	-	5	-	-	-	2	98	-	-	-	-	-	2	78	1	19	-	-	-
	(r)			33						33						32					32								
4A(1)	(a)	8	10	82	-	-	-	-	8	5	87	-	-	-	-	33	67	-	-	-	-	-	25	-	75	-	-	-	-
	(r)			30						30						22					25								
4A(2)	(a)	49	3	48	-	-	-	-	75	2	22	1	-	-	-	76	-	24	-	-	-	-	67	-	33	-	-	-	-
	(r)			17						8						8					11								
4A(3)	(a)	8	8	81	3	-	-	-	6	8	83	3	-	-	-	8	6	82	4	-	-	-	12	-	88	-	-	-	-
	(r)			30						31						30					29								

Table 1 continued

Question no.
Distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round / July - 1978						2nd Round / Oct. - 1978						3rd Round / Jan. - March 1979						4th Round / Apr. - 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
B	(a)	10	46	39	5	-	-	-	7	30	54	9	-	-	-	16	11	73	-	-	-	-	12	11	74	3	-	-	-
	(r)			30							31							28							27				
5A	(a)	91*	2	1	6	-	-	-	92	2	-	3	3	-	-	94	-	-	6	-	-	-	100	-	-	-	-	-	-
	(r)			2							2							1											
5E	(a)	97*	-	-	4	-	-	-	97	-	1	2	-	-	-	95	1	-	4	-	-	-	100	-	-	-	-	-	-
	(r)										1							1											
5C	(a)	6	65	29	-	-	-	-	3	77	20	-	-	-	-	9	26	65	-	-	-	-	9	43	48	-	-	-	-
	(r)			47							48							45							45				
5	(a)	1	97	2	-	-	-	-	1	99	-	-	-	-	-	2	98	-	-	-	-	-	1	98	-	1	-	-	-
	(r)			33							33							32							33				
7	(a)	-	98	2	-	-	-	-	1	99	-	-	-	-	-	1	99	-	-	-	-	-	-	99	1	-	-	-	-
	(r)			25							24							24							24				
8(b)	(a)	1	-	1	98	-	-	-	4	-	4	92	-	-	-	2	-	2	96	-	-	-	1	-	-	99	-	-	-
	(r)			33							32							32							33				
8(c)1	(a)	100	-	-	-	-	-	-	98	-	-	1	-	-	(9)	75	-	-	14	-	-	(7)	100	-	-	-	-	-	(8)(9)
	(r)														1						-							5 2	
8(c)2	(a)	100	-	-	-	-	-	-	100	-	-	-	-	-	-	86	-	-	5	-	-	(7)	100	-	-	-	-	-	(8)(9)
	(r)														-						3 2							1 3	

Table 1 continued

Question no. Description of alternatives Actual (a) Random (r)	Survey Round Alternatives																												
	1st Round / July - 1978							2nd Round / Oct. - 1978							3rd Round / Jan. - 1979						4th Round / Apr. - 1979								
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
8(c)3	(a)	100	-	-	-	-	-	99	-	1	-	-	-	-	100	-	-	-	-	-	-	-	100	-	-	-	-	-	-
	(r)																												
8(c)4	(a)	100	-	-	-	-	-	98	-	-	-	-	-	100	-	-	-	-	-	-	-	100	-	-	-	-	-	-	
	(r)																												
9(1) Fishing	(a)	-	53	47	-	-	-	1	54	45	-	-	-	3	29	68	-	-	-	-	1	39	60	-	-	-	-		
	(r)		50						49						48							49							
9(2) Fish process	(a)	5	28	67	-	-	-	1	28	71	-	-	-	3	21	76	-	-	-	-	3	56	41	-	-	-	-		
	(r)		47						49						48							48							
9(3) Farming	(a)	17	8	75	-	-	-	4	35	61	-	-	-	10	54	36	-	-	-	-	20	56	24	-	-	-	-		
	(r)		4						48						45							40							
9(4) Coconut Farm	(a)	19	16	65	-	-	-	5	34	61	-	-	-	14	25	61	-	-	-	-	20	45	35	-	-	-	-		
	(r)		39						47						43							40							
9(5) Cottage Ind.	(a)	15	28	56	-	-	-	5	29	56	-	-	-	19	71	10	-	-	-	-	20	58	22	-	-	-	-		
	(r)		42						47						40							40							
9(6) Boat Build.	(a)	6	45	48	-	-	-	5	56	41	-	-	-	10	80	10	-	-	-	-	19	68	13	-	-	-	-		
	(r)		47						47						45							40							
9(7) Retail trade	(a)	7	54	39	-	-	-	2	84	14	-	-	-	3	95	2	-	-	-	-	3	95	-	-	-	-	-		
	(r)		45						49						48							40							

Table I continued

Question no. distribution answers by alternatives	Survey Round Alternatives																											
	1st Round / July - 1978 Sept.						2nd Round / Oct. - 1978 Dec.						3rd Round / Jan. - 1979 March						4th Round / Apr. - 1979 June									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Actual (a) Random (r)																												
9(8) Repair of boats & gear	(a)	1	75	24	-	-	-	1	28	11	-	-	-	-	6	90	4	-	-	-	-	15	83	2	-	-	-	-
	(r)		49						49							47							42					
9(9) House repair	(a)	4	54	42	-	-	-	3	65	32	-	-	-	-	5	49	45	-	-	-	-	13	47	40	-	-	-	-
	(r)		45						48							49							43					
9(10) Idle	(a)	4	82	14	-	-	-	7	76	21	-	-	-	-	3	47	50	-	-	-	-	2	57	41	-	-	-	-
	(r)		62						46							46							49					
9(11) Emigrate	(a)	4	32	64	-	-	-	3	52	45	-	-	-	-	3	26	73	-	-	-	-	2	39	50	-	-	-	-
	(r)		68						40							48							45					
10	(a)	3	3	94	-	-	-	1	-	99	-	-	-	-	1	-	99	-	-	-	-	-	-	100	-	-	-	-
	(r)		49						49							49							50					
11(a)	(a)	12	-	44	46	-	-	5	1	60	14	-	-	-	6	-	45	59	-	-	-	5	-	46	46	-	-	-
	(r)			29						31							31							31				
11(b)	(a)	17	10	6	19	48	-	9	7	11	2	71	-	-	6	3	10	13	68	-	-	5	-	1	19	75	-	-
	(r)			20						22							23							23				
12	(a)	1	54	42	3	-	-	2	76	2	29	-	-	-	2	97	3	-	-	-	-	2	28	6	16	-	-	-
	(r)			33						32							32							32				

Table 1 continued

KEDAI BULOH

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/ July - Sept. 1978						2nd Round/ Oct. - Dec. 1978						3rd Round/ Jan. - March 1979						4th Round/ Apr. - June 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
13(i)	(a)	14	11	35	32	8	-	-	8	3	39	45	5	-	-	6	-	33	48	13	-	-	17	-	26	37	20	-	-
	(r)			21							23							23							21				
13(ii)	(a)	19	44	37	-	-	-	-	9	40	50	1	-	-	-	6	24	54	15	-	-	-	17	33	30	30	-	-	-
	(r)			20							22							23							20				
13(iii)	(a)	6	92	2	-	-	-	-	4	95	1	-	-	-	-	5	82	13	-	-	-	-	16	75	9	-	-	-	-
	(r)			23							24							23							21				
14a(i)	(a)	11	75	14	-	-	-	-	5	79	16	-	-	-	-	10	54	36	-	-	-	-	8	60	32	-	-	-	-
	(r)			44							47							45							45				
14a(ii)	(a)	8	87	5	-	-	-	-	7	76	17	-	-	-	-	15	52	33	-	-	-	-	8	61	31	-	-	-	-
	(r)			45							45							42							45				
14A(3)	(a)	9	87	4	-	-	-	-	7	63	30	-	-	-	-	16	51	33	-	-	-	-	10	59	31	-	-	-	-
	(r)			45							45							42							45				
14b(i)	(a)	5	69	25	-	-	-	-	10	51	39	-	-	-	-	6	82	12	-	-	-	-	9	91	-	-	-	-	-
	(r)			47							45							47							45				
14b(ii)	(a)	4	82	14	-	-	-	-	11	50	29	-	-	-	-	7	90	3	-	-	-	-	5	91	-	-	-	-	-
	(r)			44							44							45							45				

Table 1 continued

Question no. distribution of answers by alternatives Actual (a) Random (r)	Survey Round Alternatives																										
	1st Round/ July - 1978 Sept.						2nd Round / Oct. - 1978 Dec.						3rd Round / Jan. - 1979 March						4th Round/ Apr. - 1979 June								
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5
14b(iii)	(a)	5	93	2	-	-	-	7	93	-	-	-	-	5	94	1	-	-	-	-	6	94	-	-	-	-	-
	(r)		47						45						47							47					
14b(iv)	(a)	5	92	3	-	-	-	5	94	1	-	-	-	5	95	-	-	-	-	-	5	95	-	-	-	-	-
	(r)		47						47						47							47					
14c(i)	(a)	3	94	3	-	-	-	6	78	16	-	-	-	12	59	29	-	-	-	-	11	66	23	-	-	-	-
	(r)		48						47						45							44					
14c(ii)	(a)	5	82	12	-	-	-	8	74	18	-	-	-	15	55	29	-	-	-	-	12	68	20	-	-	-	-
	(r)		47						45						42							44					
14d(i)	(a)	8	8	84	-	-	-	9	10	81	-	-	-	11	1	88	-	-	-	-	7	-	93	-	-	-	-
	(r)		49						45						46							46					
14d(ii)	(a)	10	9	91	-	-	-	9	14	77	-	-	-	11	-	89	-	-	-	-	7	-	93	-	-	-	-
	(r)		45						45						44							46					
15(1) Fishing	(a)	1	93	6	-	-	-	2	91	7	-	-	-	4	95	1	-	-	-	-	1	59	14	-	-	-	-
	(r)		49						48						48							45					
15(2) Fish processing	(a)	3	94	3	-	-	-	6	84	10	-	-	-	4	90	5	-	-	-	-	3	75	22	-	-	-	-
	(r)		48						47						47							57					

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

	Survey Round Alternatives																												
	1st Round / July - 1978						2nd Round / Oct. - 1978						3rd. Round / Jan. - 1979						4th Round / Apr. - 1979										
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
15(3) Farming (a)	42	53	5	-	-	-	-	9	66	45	-	-	-	-	24	62	14	-	-	-	-	20	54	26	1	-	-	-	-
(r)		29							45							38							40						
15(4) Coconut Farming (a)	53	44	3	-	-	-	-	8	50	42	-	-	-	-	26	47	27	-	-	-	-	22	64	14	-	-	-	-	-
(r)		23							46							42							39						
15(5) Cottage industry (a)	33	66	1	-	-	-	-	8	54	38	-	-	-	-	26	70	70	-	-	-	-	22	62	16	-	-	-	-	-
(r)		33							46							42							39						
15(6) Post Build. (a)	20	78	2	-	-	-	-	6	63	31	-	-	-	-	24	44	32	-	-	-	-	19	47	34	-	-	-	-	-
(r)		40							47							38							30						
15(7) Retail trade (a)	12	85	3	-	-	-	-	5	89	6	-	-	-	-	5	73	22	-	-	-	-	4	92	4	-	-	-	-	-
(r)		44							47							47							46						
15(8) Repair of boats & gear (a)	17	75	8	-	-	-	-	6	74	20	-	-	-	-	21	45	34	-	-	-	-	19	52	29	-	-	-	-	-
(r)		42							47							39							40						
16(i) (a)	6	57	5	34	-	-	-	3	62	2	13	-	-	-	7	50	18	25	-	-	-	11	60	9	20	-	-	-	-
(r)		24							24							20							22						
16(ii) (a)	2	94	2	2	-	-	-	3	92	-	5	-	-	-	4	74	20	2	-	-	-	9	61	27	3	-	-	-	-
(r)		24							24							24							22						

Question no.
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answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/ July - 1978 Sept.						2nd Round/ Oct. - 1978 Dec.						3rd Round/ Jan. - 1979 March						4th Round/ Apr. - 1979 June									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
16(iii)	(a)	2	18	2	78	-	-	-	9	7	2	81	1	-	-	7	-	-	92	1	-	-	9	3	-	88	-	-	-
	(r)			24								22							23							22			
16(iv)	(a)	4	5	1	90	-	-	-	19	2	3	74	2	-	-	11	3	-	86	-	-	-	12	-	-	88	-	-	-
	(r)			24								17							22							22			
16(v)	(a)	5	65	-	30	-	-	-	8	63	1	28	-	-	-	9	25	-	66	-	-	-	9	38	17	36	-	-	-
	(r)			23								23							22							22			
17	(a)	13	6	16	31	17	17	-	8	16	34	21	19	8	-	5	-	2	67	26	-	-	12	26	17	34	17	-	-
	(r)				17							18							19							17			
19(a)	(a)	2	4	8	9	12	5	60	11	7	10	10	7	16	34	14	-	-	3	26	24	33	16	-	1	4	9	12	58
	(r)				16							14							14							14			
19b	(a)	9	31	2	5	2	51	-	12	11	9	12	6	50	-	16	1	21	18	20	24	-	12	-	27	4	-	57	-
	(r)				18							17							16							17			
20	(a)	8	28	24	40	-	-	-	5	67	9	13	-	-	-	5	71	3	21	-	-	-	20	50	-	20	-	-	-
	(r)			30								31							31							26			
21(i)	(a)	1	3	96	-	-	-	-	4	5	91	-	-	-	-	2	15	83	-	-	-	-	3	48	49	-	-	-	-
	(r)			49							48							49							49				

Question no.
distribution of
answers by
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Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round / July - 1978						2nd Round / Oct. - 1978						3rd Round / Jan. - 1979						4th Round / Apr. - 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
21(ii)	(A)	-	75	25	-	-	-	-	-	99	1	-	-	-	-	1	99	-	-	-	-	-	1	99	-	-	-	-	-
	(r)		50							50							49							49					
21(iii)	(a)	1	98	1	-	-	-	-	2	50	47	-	-	-	-	1	50	49	-	-	-	-	-	80	20	-	-	-	-
	(r)		49							48							49							50					
21(iv)	(a)	-	100	-	-	-	-	-	-	100	-	-	-	-	-	1	99	-	-	-	-	-	100	100	-	-	-	-	-
	(r)		50							50							49							50					
21(v)	(a)	-	100	-	-	-	-	-	-	98	2	-	-	-	-	1	99	-	-	-	-	-	-	100	-	-	-	-	-
	(r)		50							50							49							50					
21(vi)	(a)	2	28	70	-	-	-	-	2	23	75	-	-	-	-	1	28	71	-	-	-	-	1	42	57	-	-	-	-
	(r)		49							48							49							49					
21(vii)	(a)	-	100	-	-	-	-	-	-	99	1	-	-	-	-	1	99	-	-	-	-	-	-	100	-	-	-	-	-
	(r)		50							50							50							50					
21(viii)	(a)	4	6	90	-	-	-	-	3	27	70	-	-	-	-	3	62	35	-	-	-	-	2	44	56	-	-	-	-
	(r)		48							48							48							60					

Table 1 continued

Question no. Distribution of answers by alternatives Actual (a) Random (r)	Survey Round Alternatives																															
	1st Round							2nd Round							3rd Round							4th Round										
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6				
22(A)1	(a)	4	-	-	4	38	-	24	-	-	-	-	93	1	5	1	-	-	1	18	72	-	8	1	2	-	-	1	88	-	5	6
	(r)																															
22(A)2	(a)	7	-	-	12	15	9	57	-	-	-	6	7	-	85	1	1	4	4	6	21	-	32	32	5	-	13	16	7	-	61	20
	(r)																															
22(A)3	(a)	51	-	4	6	3	2	(6X7) 4 20	23	-	16	-	-	1	3	57	15	-	59	1	4	-	9	12	95	-	27	12	1	-	9	16
	(r)																															
22(A)4	(a)	98	-	-	-	1	-	1	55	-	21	-	-	-	1	14	51	-	17	1	3	-	11	17	60	-	11	7	4	1	2	15
	(r)																															
22(A)5	(a)	99	-	1	-	-	-	-	100	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-
	(r)																															
22B	(a)	-	57	43	-	-	-	-	-	88	12	-	-	-	-	-	39	1	-	-	-	-	-	-	-	100	-	-	-	-	-	-
	(r)																															
	(a)		50							50							50									50						
	(r)																															

Table 1

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
1(a)	(a)	-	99	-	-	-	-	-	1	98	-	-	-	-	-	1	98	-	-	-	-	-	-	99	-	-	-	-	-
	(r)				16							5								16						16			
2	(a)	1	-	1	97	-	-	-	1	-	-	98	-	-	-	1	1	1	96	-	-	-	3	-	1	95	-	-	-
	(r)			32								32							32							32			
3(a)	(a)	7	51	32	9	-	-	-	4	91	3	1	-	-	-	4	23	38	34	-	-	-	5	21	56	17	-	-	-
	(r)			30								31							31							31			
3(b)	(a)	3	45	44	7	-	-	-	4	90	4	1	-	-	-	4	24	51	20	-	-	-	4	26	60	11	-	-	-
	(r)			32								31							31							31			
3(c)	(a)	6	83	1	9	-	-	-	4	77	1	17	-	-	-	2	71	21	5	-	-	-	3	89	4	3	-	-	-
	(r)			31								31							32							32			
4(a)i	(a)	9	13	68	9	-	-	-	8	1	90	-	-	-	-	4	-	94	1	-	-	-	9	1	89	-	-	-	-
	(r)			30								30							31							30			
4(a)ii	(a)	9	1	87	2	-	-	-	8	-	91	-	-	-	-	4	-	95	-	-	-	-	9	-	90	-	-	-	-
	(r)			30								30							31							30			
4(a)iii	(a)	6	2	61	30	-	-	-	7	1	88	3	-	-	-	4	2	89	4	-	-	-	8	3	88	-	-	-	-
	(r)			31								30							31							30			

Table 1 continued

Question no. distribution of answers by alternatives	Survey Round Alternatives																												
	1st Round/July-Sept.1978							2nd Round /Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979									
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
4(b)	(a)	8	40	36	15	-	-	-	8	6	30	55	-	-	-	6	18	67	8	-	-	-	9	33	56	1	-	-	-
	(r)			40						30						31						30							
5(a)	(a)	97*	-	-	2	-	-	-	98	-	-	1	-	-	-	98	-	-	-	1	-	-	96	2	1	-	-	-	-
	(r)																												
5(b)	(a)	68*	1	1	29	-	-	-	96	-	-	1	2	-	-	95	3	-	-	1	-	-	99	-	-	-	-	-	-
	(r)			7												1													
5(c)	(a)	10	53	36	-	-	-	-	7	17	75	-	-	-	-	5	39	55	-	-	-	-	10	22	67	-	-	-	-
	(r)		44						45					47				44											
6	(a)	1	73	25	-	-	-	-	1	74	23	1	-	-	-	2	76	21	-	-	-	-	2	73	24	-	-	-	-
	(r)			32						32					32				32										
7	(a)	-	3	96	-	-	-	-	1	-	98	-	-	-	-	-	15	84	-	-	-	-	1	1	97	-	-	-	-
	(r)			24						24					24				24										
8(b)	(a)	1	-	1	97	-	-	-	1	-	-	98	-	-	-	2	-	-	97	-	-	-	3	-	-	96	-	-	-
	(r)			32						32					32				32										
9 Fishing	(a)	1	98	-	-	-	-	-	2	97	-	-	-	-	2	94	3	-	-	-	-	2	97	-	-	-	-	-	
	(r)		49						48					48				48											

Table 1 continued

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round /Apr.-June 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
9 Fish process	(a)	5	89	5	-	-	-	-	3	74	22	-	-	-	-	4	39	56	-	-	-	-	4	51	44	-	-	-	-
	(r)		47							48						47							47						
9 Farming	(a)	24	23	52	-	-	-	-	9	1	89	-	-	-	-	6	6	87	-	-	-	-	6	-	93	-	-	-	-
	(r)		37							45						46						46							
9 Coconut Farm	(a)	26	14	59	-	-	-	-	8	1	90	-	-	-	-	7	5	87	-	-	-	-	6	-	93	-	-	-	-
	(r)		36							30						46						46							
9 Cottage Ind.	(a)	36	6	57	-	-	-	-	11	-	88	-	-	-	-	7	-	92	-	-	-	-	6	-	93	-	-	-	-
	(r)		31							44						46						46							
9 Boat Building	(a)	6	91	2	-	-	-	-	4	35	60	-	-	-	-	2	26	71	-	-	-	-	3	24	72	-	-	-	-
	(r)		46							47						48						48							
9 Repair of boats & gear	(a)	4	91	4	-	-	-	-	4	75	20	-	-	-	-	3	74	22	-	-	-	-	4	51	44	-	-	-	-
	(r)		47							47						48						47							
9 Retail Trade	(a)	5	90	4	-	-	-	-	3	35	61	-	-	-	-	2	35	62	-	-	-	-	3	24	72	-	-	-	-
	(r)		47							48						48						48							
9 House repair	(a)	15	63	21	-	-	-	-	4	30	63	-	-	-	-	2	34	63	-	-	-	-	3	29	77	-	-	-	-
	(r)		42							47						48						48							

Table 1 continued

Question no.
distribution of
answers by
alternatives:
Actual (a)
Random (r)

		Survey Round Alternatives																												
		1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979										
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
9	Idle	(a)	5	13	51	-	-	-	-	3	55	41	-	-	-	-	2	56	41	-	-	-	-	3	74	22	-	-	-	-
		(r)		47						49							48							48						
9	Emigrate	(a)	23	5	71	-	-	-	-	4	1	94	-	-	-	-	3	5	91	-	-	-	-	3	22	74	-	-	-	-
		(r)		38						47							48							48						
10		(a)	-	-	99	-	-	-	-	1	1	97	-	-	-	-	1	1	97	-	-	-	-	2	-	97	-	-	-	-
		(r)		49						49							48							48						
11(a)		(a)	2	-	51	46	-	-	-	2	-	43	54	-	-	-	2	1	48	48	-	-	-	2	-	58	39	-	-	-
		(r)		32						32							32							32						
11(b)		(a)	3	1	8	52	36	-	-	2	-	22	29	46	-	-	3	1	6	59	30	-	-	2	-	3	53	25	-	-
		(r)			24						24							24							24					
12		(a)	-	3	-	99	-	-	-	3	-	1	95	-	-	-	2	4	1	92	-	-	-	3	-	-	96	-	-	-
		(r)		33						32							32							32						
13i		(a)	1	1	36	63	-	-	-	1	-	37	61	-	-	-	3	1	38	57	-	-	-	3	-	36	56	-	-	-
		(r)		24						24							24							24						
13ii		(a)	1	3	95	-	-	-	-	1	2	96	-	-	-	-	5	9	80	3	2	-	-	3	-	35	1	-	-	-
		(r)		24						24							23							24						

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
13iii	(a)	1	37	61	-	-	-	-	1	30	68	-	-	-	-	7	35	56	-	1	-	-	4	33	61	1	-	-	-
	(r)				24							24							23							23			
14(a)i	(a)	6	58	35	-	-	-	-	5	51	43	-	-	-	-	8	53	38	-	-	-	-	7	18	74	-	-	-	-
	(r)		46							47							45							46					
14(a)ii	(a)	5	71	23	-	-	-	-	6	56	37	-	-	-	-	6	71	22	-	-	-	-	7	38	54	-	-	-	-
	(r)		47							46							46							45					
14(a)iii	(a)	8	72	19	-	-	-	-	8	53	34	-	-	-	-	3	47	43	-	-	-	-	7	30	62	-	-	-	-
	(r)		45							46							45							45					
14(b)i	(a)	10	82	7	-	-	-	-	4	80	15	-	-	-	-	6	80	13	-	-	-	-	7	91	1	-	-	-	-
	(r)		44							47							46							45					
14(b)ii	(a)	8	87	4	-	-	-	-	4	75	20	-	-	-	-	8	79	12	-	-	-	-	8	91	-	-	-	-	-
	(r)		45							47							45							45					
14(b)iii	(a)	9	89	1	-	-	-	-	5	92	1	-	-	-	-	5	91	-	-	-	-	-	6	92	-	-	-	-	-
	(r)		45							45							46							45					
14(b)iv	(a)	11	88	-	-	-	-	-	7	91	1	-	-	-	-	6	92	1	-	-	-	-	7	92	-	-	-	-	-
	(r)		44							45							45							45					

Table 1 continued

Question no. distribution of answers by alternatives Actual (a) Random (r)	Survey Round Alternatives																																														
	1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979																												
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6																			
16(c)i	(a)	9	90	-	-	-	-	5	94	-	-	-	-	-	3	90	-	-	-	-	10	89	-	-	-	-	(r)	45	-	-	-	-	47	-	-	-	-	48	-	-	-	-	44	-	-	-	-
16(c)ii	(a)	15	81	3	-	-	-	14	77	8	-	-	-	-	6	85	8	-	-	-	12	87	-	-	-	-	(r)	42	-	-	-	-	42	-	-	-	-	46	-	-	-	-	43	-	-	-	-
16d(i)	(a)	7	49	43	-	-	-	8	28	63	-	-	-	-	6	9	94	-	-	-	6	16	77	-	-	-	(r)	46	-	-	-	-	45	-	-	-	-	46	-	-	-	-	45	-	-	-	-
16d(ii)	(a)	28	5	65	-	-	-	8	4	87	-	-	-	-	5	4	90	-	-	-	5	5	88	-	-	-	(r)	45	-	-	-	-	45	-	-	-	-	47	-	-	-	-	46	-	-	-	-
15 Fishing	(a)	1	73	25	-	-	-	2	91	6	-	-	-	-	2	85	12	-	-	-	2	85	12	-	-	-	(r)	49	-	-	-	-	48	-	-	-	-	48	-	-	-	-	48	-	-	-	-
15 Fish processing	(a)	2	87	10	-	-	-	3	63	53	-	-	-	-	8	72	19	-	-	-	2	77	70	-	-	-	(r)	48	-	-	-	-	48	-	-	-	-	45	-	-	-	-	48	-	-	-	-
15 Farming	(a)	47	27	25	-	-	-	12	44	43	-	-	-	-	23	59	17	-	-	-	18	71	10	-	-	-	(r)	25	-	-	-	-	43	-	-	-	-	38	-	-	-	-	40	-	-	-	-
15 Coconut	(a)	33	39	27	-	-	-	9	45	44	-	-	-	-	23	55	21	-	-	-	14	79	10	-	-	-	(r)	33	-	-	-	-	45	-	-	-	-	38	-	-	-	-	40	-	-	-	-

Table 1 continued

PANGKOR

Question no. distribution of answers by alternatives Actual (a) Random (r)	Survey Round Alternatives																																		
	1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979																
	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6							
15 Cottage Ind.	(a)	59	28	12	-	-	-	-	11	44	44	-	-	-	-	-	26	54	19	-	-	-	-	-	-	-	-	-	24	61	14	-	-	-	-
	(r)		20							44									36												37				
15 Boat Build.	(a)	2	86	11	-	-	-	-	3	61	35	-	-	-	-	-	9	75	15	-	-	-	-	-	-	-	-	-	4	75	20	-	-	-	-
	(r)		48							48									45											47					
15(7) Retail trade	(a)	9	69	21	-	-	-	-	1	73	25	-	-	-	-	-	8	89	2	-	-	-	-	-	-	-	-	-	3	96	-	-	-	-	-
	(r)		45							49									45											48					
15(8) Repair of boats & gear	(a)	7	52	30	-	-	-	-	3	61	35	-	-	-	-	-	9	70	20	-	-	-	-	-	-	-	-	-	3	84	12	-	-	-	-
	(r)		46							48									45											48					
16(i)	(a)	1	90	-	8	-	-	-	4	88	-	7	-	-	-	-	6	66	-	27	-	-	-	-	-	-	-	-	4	38	-	57	-	-	-
	(r)			24								23								23											23				
16(ii)	(a)	1	97	-	1	-	-	-	2	91	-	6	-	-	-	-	1	84	-	14	-	-	-	-	-	-	-	-	3	96	-	-	-	-	-
	(r)			24								24								24											24				
16(iii)	(a)	1	78	1	19	-	-	-	4	78	-	17	-	-	-	-	5	68	3	23	-	-	-	-	-	-	-	-	3	72	-	24	-	-	-
	(r)			24								23								23											24				
16(iv)	(a)	1	60	3	35	-	-	-	3	67	-	29	-	-	-	-	6	58	2	33	-	-	-	-	-	-	-	-	4	40	-	55	-	-	-
	(r)			24								24								23											23				

Table 1 continued

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
16(v)	(a)	1	97	-	1	-	-	-	1	97	-	1	-	-	-	2	90	2	5	-	-	-	2	83	-	14	-	-	-
	(r)			24								24							24							24			
17	(a)	3	-	-	4	44	48	-	6	1	15	58	11	6	-	4	-	1	16	92	36	-	3	-	-	1	41	54	-
	(r)			19								18							19							19			
19(a)	(a)	5	-	-	-	1	10	83	5	-	-	-	-	2	92	8	-	1	-	11	21	58	7	-	-	-	2	17	73
	(r)				15							15								15						15			
19(b)	(a)	6	4	10	17	13	49	-	7	1	12	40	12	27	-	12	15	24	11	14	23	-	13	-	-	15	20	51	-
	(r)				18							18							17							17			
20	(a)	2	2	4	91	-	-	-	4	14	6	75	-	-	-	1	4	3	91	-	-	-	3	1	-	95	-	-	-
	(r)			32							31							32							32				
21 i	(a)	1	98	-	-	-	-	-	1	98	-	-	-	-	-	-	99	-	-	-	-	-	2	97	-	-	-	-	-
	(r)			49							49							49							48				
21 ii	(a)	-	99	-	-	-	-	-	1	98	-	-	-	-	-	-	89	10	-	-	-	-	2	37	-	-	-	-	-
	(r)			49							49							49							49				
21 iii	(a)	1	98	-	-	-	-	-	1	98	-	-	-	-	-	-	97	1	-	-	-	-	2	97	-	-	-	-	-
	(r)			49							49							49							49				

Question no.
distribution of
answers by
alternatives
Actual (a)
Random (r)

		Survey Round Alternatives																											
		1st Round/July-Sept.1978						2nd Round/Oct.-Dec.1978						3rd Round/Jan.-March 1979						4th Round/Apr.-June 1979									
		0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6
21 iv	(a)	-	99	-	-	-	-	-	1	98	-	-	-	-	-	-	95	4	-	-	-	-	2	97	-	-	-	-	-
	(r)		49							49							49							48					
21 v	(a)	-	99	-	-	-	-	-	1	98	-	-	-	-	-	-	99	-	-	-	-	-	2	97	-	-	-	-	-
	(r)		49							49							49							48					
21 vi	(a)	1	22	76	-	-	-	-	1	1	97	-	-	-	-	-	5	94	-	-	-	-	2	-	97	-	-	-	-
	(r)		49							49							48							48					
21 vii	(a)	-	99	-	-	-	-	-	1	98	-	-	-	-	-	-	96	3	-	-	-	-	2	97	-	-	-	-	-
	(r)		49							49							49							48					
21 viii	(a)		99	-	-	-	-	-	1	97	1	-	-	-	-	-	92	7	-	-	-	-	2	97	-	-	-	-	-
	(r)		49							49							49							48					

*The number includes those of the key informants who answered: "enough" in question 4(a)iii

TABLE 2

Questions

No.	Quarterly Right Blend Wrong	Type a b c	Survey Round Assessment											
			1			2			3			4		
			Right	Wrong	D/K	Right	Wrong	D/K	Right	Wrong	D/K	Right	Wrong	D/K
1a	R	a	100	-	-	99	-	1	99	-	1	99	-	1
1(b)	R	a	91	3	6	76	10	14	67	4	23	77	-	23
2	R	b	95	2	3	97	2	1	98	-	2	97	-	3
3(a)	B	b	21	72	7	61	33	6	-	-	-	-	-	-
3(c)	R	a	97	2	1	99	-	1	98	-	2	97	1	2
4(b)	B	b	46	44	10	9	85	6	-	-	-	-	-	-
5(c)	B	b	29	65	6	20	77	3	65	26	9	48	43	9
6	R	a	99	-	1	99	-	1	98	-	2	98	1	1
7	R	a	98	2	-	99	-	1	99	-	1	99	1	-
8(b)	R	b	99	-	1	96	-	4	98	-	2	99	-	1
9 (Fish Processing)	B	a	67	28	5	71	28	1	76	21	3	55	41	3
9 (Farming)	B	a	75	8	17	61	35	4	36	54	10	24	56	20
9 (Coconut Farming)	B	a	65	16	19	61	34	5	61	25	14	35	45	20
9 (Retail Trade)	W	a	39	54	7	14	84	3	2	95	3	-	95	5
10	R	a	94	3	3	99	-	1	99	-	1	100	-	-

Questions														
No.	Quarterly Right Blend Wrong	Type a b c	Survey Round Assessment											
			1			2			3			4		
			Right	Wrong	D/K	Right	Wrong	D/K	Right	Wrong	D/K	Right	Wrong	D/K
11(a)	B	b	44	44	12	40	55	5	45	49	6	46	49	5
12	W	a	3	97	-	20	78	2	-	98	2	16	82	2
13i	B	a	46	40	14	42	50	8	33	61	6	26	57	17
13ii	R	a	81	-	19	90	1	9	78	16	6	63	20	17
13iii	R	a	92	2	6	95	1	4	82	13	5	75	9	16
14(a)(i)	W	c	14	75	11	16	79	5	36	54	10	32	60	8
14(a)(ii)	W	c	5	87	8	17	76	7	33	52	15	31	61	8
14(b)(i)	R	a	69	26	5	51	39	10	82	12	6	91	-	9
14(b)(ii)	R	a	82	19	9	60	29	11	90	3	7	91	-	9
14(b)(iii)	R	a	90	3	7	93	-	7	94	1	5	94	-	6
14(b)(iv)	R	a	92	3	5	94	1	5	95	-	5	95	-	5
14(c)(i)	R	c	94	3	3	78	16	6	59	29	12	66	23	11
14(c)(ii)	B	c	82	12	6	74	18	8	56	29	15	68	20	12
14(d)(i)	R	a	84	8	8	81	10	9	88	1	11	93	-	7
14(d)(ii)	R	b	81	9	10	77	14	9	89	-	11	93	-	7

Questions

No.	Quarterly Right Blend in cng ^r	Type a b c	Survey Round Assessment											
			1			2			3			4		
			Right	Wrong	D/K	Right	Wrong	D/K	Right	Wrong	D/K	Right	Wrong	D/K
15 (Fishing)	R	c	93	6	1	91	7	2	95	1	4	99	-	1
16(i)	R	a	91	5	4	95	2	3	95	18	7	80	9	11
16(ii)	R	a	98	-	2	97	-	3	96	-	4	91	-	9
16(iii)	R	a	98	-	2	90	1	9	92	1	7	91	-	9
16(iv)	R	a	91	5	4	77	4	19	86	3	11	88	-	12
16(v)	R	a	95	-	5	92	-	8	91	-	9	91	-	9
17	B	b	48	39	13	40	52	8	93	2	5	51	37	12
19(a)	B	b	60	38	2	39	50	11	33	53	14	58	26	16
21 i	W	a	3	96	1	5	91	4	15	83	2	48	49	3
21 ii	R	a	75	25	-	99	1	-	99	-	1	99	-	1
21 iii	B	a	98	1	1	50	47	3	50	49	1	80	20	-
21 iv	R	a	100	-	-	100	-	-	99	-	1	100	-	-
21 v	R	a	100	-	-	98	2	-	99	-	1	100	-	-
21 vii	R	a	100	-	-	99	1	-	99	-	1	100	-	-
21 viii	W	a	6	90	4	27	70	3	62	35	3	44	54	2

TABLE 2

PANGKOR

Question No.	Right Blend Wrong	Type a b c	Survey Round/Assessment											
			1/July - September 78			2/Oct. - Dec. 78			3/Jan. - March 79			4/April - June 79		
			Right	Wrong	DK	Right	Wrong	DK	Right	Wrong	DK	Right	Wrong	DK
1(a)	R	a	99	-	-	98	-	1	98	-	1	99	-	-
1(b)	R	a	97	-	2	98	-	1	94	1	4	97	-	2
2	R	b	98	-	1	98	-	1	97	1	1	96	-	3
3(a)	R	b	82	9	7	91	4	4	-	-	-	-	-	-
3(c)	R	a	83	10	6	77	18	4	71	26	2	89	7	3
4(b)	B	b	51	40	8	85	6	8	-	-	-	-	-	-
5(c)	B	b	36	53	10	75	17	7	55	39	5	67	22	10
6	R	a	98	-	1	97	1	1	97	-	2	97	-	2
7	R	a	96	3	-	98	-	1	84	15	-	97	1	1
8(b)	R	b	98	-	1	98	-	1	97	-	2	96	-	3
9(Fishing)	R	a	98	-	1	97	-	2	94	3	2	97	-	2
9 (Fish Processing)	W	a	5	89	5	22	74	3	56	39	4	44	31	4
9 (Farming)	R	a	52	23	24	89	1	9	87	6	6	93	-	5
9 (Coconut Farming)	R	a	59	14	26	90	1	8	87	5	7	93	-	6
9 (Cottage Industry)	R	a	57	6	36	88	-	11	92	-	7	93	-	6
9 (Boat Building)	B	a	2	91	6	60	35	4	71	26	2	72	24	3
9 (Retail Trade)	B	a	4	90	5	61	35	3	62	35	2	72	24	3
9 (Idle)	B	a	41	53	5	41	55	3	41	56	2	22	74	3
9 (Emigrate)	R	a	71	5	23	94	1	4	91	5	3	74	22	3
10	R	a	99	-	-	98	-	1	98	-	1	97	-	2
11 (a)	R	b	97	-	2	97	-	2	96	1	2	97	-	2
12	R	a	99	-	-	96	-	3	93	4	2	96	-	3

TABLE 2 continued

PANGKOR

Question No.	Right Blend Wrong	Type a b c	Survey Round/Assessment											
			1/July - September 78			2/Oct. - Dec. 78			3/Jan. - March 79			4/April - June 79		
			Right	Wrong	DK	Right	Wrong	DK	Right	Wrong	DK	Right	Wrong	DK
13 i	B	a	34	64	1	37	61	1	38	58	3	30	66	3
13 ii	R	a	95	3	1	96	2	1	80	14	5	95	1	3
13 iii	R	a	98	-	1	98	-	1	91	1	7	94	1	4
14 (a) (i)	B	c	35	58	6	43	51	5	38	53	8	74	18	7
14 (a) (ii)	W	c	23	71	5	37	56	6	22	71	6	54	38	7
14 (b) (i)	R	a	82	7	10	89	15	4	80	13	6	91	1	7
14 (b) (ii)	R	a	87	4	8	75	20	4	79	12	8	91	-	8
14 (b) (iii)	R	a	89	1	9	92	1	6	93	-	6	93	-	5
14 (b) (iv)	R	a	88	-	11	91	1	7	92	1	6	92	-	7
14 (c) (i)	R	c	90	-	9	94	-	5	96	-	3	89	-	10
14 (c) (ii)	R	c	81	3	15	77	8	14	85	8	6	87	-	12
14 (d) (i)	B	a	43	49	7	63	28	8	84	9	6	77	16	6
14 (d) (ii)	R	b	65	5	28	87	4	8	90	4	5	88	5	6
15 (Fishing)	R	c	73	25	1	91	6	2	85	12	2	85	12	2
16 (i)	R	a	96	-	1	95	-	4	93	-	6	95	-	4
16 (ii)	R	a	98	-	1	97	-	2	98	-	1	96	-	3
16 (iii)	R	a	98	-	1	95	-	4	94	-	5	96	-	3
16 (iv)	R	a	98	-	1	96	-	3	93	-	6	96	-	4
16 (v)	R	a	98	-	1	98	-	1	97	-	2	97	-	2
17	B	b	92	4	3	19	74	6	78	17	4	95	1	3
19 (a)	R	b	83	11	5	92	2	5	58	33	8	73	19	7
21 (i)	R	a	98	-	1	98	-	1	99	-	-	97	-	2

TABLE 2 continued

Question No.	Right Blind Wrong	Type a b c	Survey Round/Assessment											
			1/July - September 78			2/Oct. - Dec. 78			3/Jan. - March 79			4/April - June 79		
			Right	Wrong	DK	Right	Wrong	DK	Right	Wrong	DK	Right	Wrong	DK
21 (ii)	R	a	92	-	-	98	-	1	89	10	-	97	-	2
21 (iii)	R	a	98	-	1	98	-	1	97	2	-	97	-	2
21 (iv)	P	a	90	-	-	98	-	1	95	4	-	97	-	2
21 (v)	R	a	99	-	-	98	-	1	99	-	-	97	-	2
21 (vi)	R	b	98	-	-	98	-	1	95	5	-	97	-	2
21 (vii)	R		99	-	-	97	1	1	92	7	-	97	-	2

TABLE 2 continued

Legend:

- R = questions fetching mostly right answers
 B = questions fetching a blend of right and wrong answers
 W = questions fetching mostly wrong answers
 DK = "Don't know"
- a = questions requiring answers referring to an immediately observable state of affairs
 b = questions requiring answers indicating a development over period of time and/or an assessment of facts involving an integration of pieces of information
 c = questions requiring answers indicating opinions Right and Wrong answers indicated by their code numbers as appearing in the questionnaire, section B.

Question	Assessment				Source of Assessment (for legend to below code no.s refer page)
	Pangkor		Kedai Buloh		
	Right	Wrong	Right	Wrong	
1.(a)	1	2-9	1	2-9	1+6
(b)	2,4,5,6,7,8	3	2,4,5,6,7,8,	3	1+6
2.	2,3	1	3	1,2	1
3.(a)	Sept. 77-78		Sept.77-78		
	1,2	3	3	1,2	2
	Dec. 77-78		Dec. 77-78		
	1	2,3	1,2	3	2
3.(c)	1	2,3	1,3	2	6
4.(b)	July-Sept.78		July-Sept.78		
	2,3	1	1	3,2	2
	Oct-Dec.78		Oct-Dec.78		
	2,3	1	3	1,2	2
5.(c)	2	1	2	1	6
6.	1,2	3	1,2	3	6
7.	2	1,3	1	2,3	1
8.(b)	2,3	1	2,3	1	6

Question	Assessment		Assessment		Source of Assessment (for legend to below code no.s refer page)
	Bangkok		Kedai Buloh		
	Right	Wrong	Right	Wrong	
9. Fishing	1	2	NA	NA	3+6
Fish-process	2	1	2	1	3+6
Farming	2	1	2	1	3+6
Coco-farm	2	1	2	1	3+6
Cott. Indust.	2	1	NA	NA	3+6
Boat build	2	1	NA	NA	3+6
Retail trade	2	1	2	1	3+6
Stay idle	2	1	NA	NA	3+6
Emigrate	2	1	NA	NA	3+6
10.	1	2	2	1	1
11.(a)	2,3	1	2	1,3	3
12	2,3	1	3	2,1	3
13.(i)	2	1,3,4	1,2	3,4	1
13.(ii)	2	1,3,4	1,2	3,4	1
13.(iii)	1,2	3,4	1	2,3,4	1
14.(a)(i)	2	1	2	1	6
14.(a)(ii)	2	1	2	1	6
14.(b)(i)	1	2	1	2	6
14.(b)(ii)	1	2	1	2	6
14.(b)(iii)	1	2	1	2	6
14.(b)(iv)	1	2	1	2	6
14.(c)(i)	1	2	1	2	6
14.(c)(ii)	1	2	1	2	6
14.(d)(i)	2	1	2	1	6
14.(d)(ii)	2	1	2	1	6
15. Fishing	1	2	1	2	6
16.(i)	1,3	2,4	3	1,4	1+3
16.(ii)	1,2,3	4	1,2,3	4	1+3
16.(iii)	1,2,3	4	1,2,3	4	1+3
16.(iv)	1,2,3	4	2,3	1,4	1+3
16.(v)	1,2,3	4	1,2,3	4	1+3
17.	4,5	1,2,3,3	3,4	1,2,5	3
19.	6	1-5	6	1-5	6
21.(i)	1	2	1	2	5+6
21.(ii)	1	2	1	2	5+6

<u>Question</u>	<u>Assessment</u>				Source of Assessment (for legend to below code no.s refer page)
	<u>Pangkor</u>		<u>Kedai Buloh</u>		
	<u>Right</u>	<u>Wrong</u>	<u>Right</u>	<u>Wrong</u>	
21.(iii)	1	2	1	2	5+6
21.(iv)	1	2	1	2	5+6
21.(v)	1	2	1	2	5+6
21.(vii)	1	2	1	2	5+6
21.(viii)	1	2	1	2	5+6

Source of Assessment, explanation of code no.s:

1. Population Census 1970
2. Annual Fisheries Statistics 1977 and 1978
3. Community Profile of Fishermen and Manpower and Training, Ministry of Agriculture, Malaysia, August 1979.
4. State reports on fishing activities 1977 and 1978.
5. Classification of Rural Villages Outside Local Authority, 1979, ICU Prime Minister's Department, Malaysia.
6. Discussions with Government Officials of the relevant Departments.

NA = No assessment

Question 3(a) : When comparing September 77/78 - December 77/78 - March 78/79^{x)}
July 78/79, do you think the amount of fish caught has

TABLE 3

KEDAI BULUH

	1/September 77/78				2/December 77/78			
	Gone down	Unchanged	Gone up (R)	Don't know	Gone Down	Unchanged	Gone Up (R)	Don't know
	Ketua Kampong	-	1	-	-	-	1	-
Traditional Healer	-	1	-	-	-	1	-	-
Administrator 1	-	-	1	-	-	-	1	-
Administrator 2	-	-	1	-	-	-	1	-
Pilot	1	2	2	-	1	1	3	-
Owner of fishing boat	2	1	1	-	3	-	1	-
Owner of fishing gear	2	-	-	-	-	-	2	-
Diver	1	1	1	1	-	3	1	-
Chief of the crew	1	-	2	-	-	-	3	-
Wholesaler	3	1	-	-	1	-	3	-
Fishmonger	3	1	-	1	3	2	-	-
Sundry Shop owner	-	-	1	1	-	2	-	-
Fisherman	18	19	9	2	18	17	13	-

x) No control information available

Question 4(b): Has the number of boats going out fishing during the past quarter

Table 3 continued

KEDAI BULUH

	1/July-Sept.1978				2/October-December 1978				3/January-March 1979				4/April-June 1979			
	Increased (R)	Un- changed	Gone down	Don't know	Increase	Un- changed	Gone down (R)	Don't know	(R) Increase	Un- changed	Gone down	Don't know	Increase	(R) Un- changed	(R) Gone down	Don't know
	Ketua Kampong	1	-	-	-	-	1	-	-	-	1	-	-	-	1	-
Traditional Healer	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	1
Administrator 1	-	-	1	-	-	-	1	-	-	1	-	-	-	-	-	-
Administrator 2	-	1	-	-	1	-	-	-	1	-	-	-	1	-	-	-
Pilot	-	5	-	-	1	4	-	-	-	5	-	-	-	5	-	-
Owner of fishing boat	4	-	-	-	4	-	-	-	2	2	-	-	-	4	-	-
Owner of fishing gear	1	1	-	-	-	1	1	-	-	2	-	-	1	2	-	-
Diver	3	1	-	-	-	4	-	-	-	4	-	-	-	3	1	-
Wholesaler	2	2	-	-	4	-	-	-	1	2	1	-	-	4	-	-
Chief of the crew	2	1	-	-	1	2	-	-	-	3	-	-	-	3	-	-
Fishmonger	4	-	-	1	4	-	1	-	-	5	-	-	-	3	2	-
Sundry shop owner	-	1	-	1	-	2	-	-	-	2	-	-	-	2	-	-
Fisherman	23	20	3	2	14	27	5	2	5	40	3	-	7	41	-	-

Question 5(c): Has there been an influx of workers from other areas during the past 3 months?

TABLE 3 continued

KEDAI BULUH

	July-September 78			October-December 78			January-March 79			April-June 79		
	Yes	No(R)	Don't know	Yes	No(R)	Don't know	Yes	No(R)	Don't know	Yes	No(R)	Don't know
	Ketua Kampong	1			1			1			1	
Traditional Healer	1			1			1			1		
Employment Officer		1			1				1			1
Pilot	1	2	2	3	2			5			5	
Owner of Fishing Boat	4			4				4			4	
Owner of Fishing gear	2			1	1		2			2		
Diver	4			4			3		1	4		
Chief of the crew	2	1		1	2		2	1			3	
Merchants	7	1	3	10		1	3	8		5	6	
Fisherman	33	15		42	6		13	34	1	23	24	1

Question 14(a) Would it make a difference in the amount of fish and in the type of fish caught if:

(i) More fishermen knew how to trace the various types of fish?

TABLE 3 continued

KEDAI BULUH

Occupation	October 1978			January 1979			April 1979			July 1979		
	Yes	No(R)	Don't know	Yes	No(R)	Don't know	Yes	No(R)	Don't know	Yes	No(R)	Don't know
	Ketua Kampong	1				1			1			1
Traditional Healer	1			1				1			1	
Pilot	4	1		1	4			5			5	
Owner of Fishing boat	4			4			4			4		
Owner of Fishing gear	2			2				2		2		
Diver	6			4				3	1		4	
Chief of the crew		3		3			1	2		3		
Merchants	10		1	10	1		9	2		6	4	1
Fisherman	37	7	4	40	8		31	17		31	17	

(ii) Those now tracing the fish had more experience in tracing and distinguishing between the types when tracing.

TABLE 3 continued

KEDAI BULUH

Occupation	October 1978			January 1979			April 1979			July 1979		
	Yes	No(R)	Don't know	Yes	No(R)	Don't know	Yes	No(R)	Don't know	Yes	No(R)	Don't know
Ketua Nanpong	1				1			1			1	
Traditional Healer	1			1				1			1	
Pilot	5				5			5			5	
Owner of fishing boat	4			4			4			4		
Owner of fishing gear	2			2				2		2		
Diver	4			4				2	2		4	
Chief of the crew	2	1		3			1		2	3		
Merchants	10		1	10		1	9	2		6	5	1
Fisherman	44	3	1	38	10		29	16	1	32	16	

Question 14 (b)(i) Generally are the helmsmen able to direct the boat to and from the fishing grounds without frequently making mistakes?

TABLE 3 continued

KEDAI BULUH

	October 1978			January 1979			April 1979			July 1979		
	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know
	Ketua Kampong	1				1		1			1	
Traditional Helmsman		1		1			1			1		
Pilot	2	3		4	1		4	1		5		
Owner of fishing boat	4			1	3		3	1		4		
Owner of fishing gear	2			2			2			2		
Diver	2	2		3	1		3	1		4		
Chief of the crew	3				3		3			3		
Merchants	8	2	1	5	4	2	11			11		
Fishermen	36	12		25	22		42	5	1	48		

Question 14(b)(ii) : Under normal weather conditions are most of the helmsmen able to lay down a course so that fishing grounds and the shore are reached without delays?

TABLE 3 continued

KEDAI BULUH

	October 1978			January 1979			April 1979			July 1979		
	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes	No	Don't know
Ketua Kampong	1				1		1			1		
Traditional Healer	1			1			1			1		
Pilot	2	3		4	1		5			5		
Owner of fishing boat	4			4			4			4		
Owner of fishing gear	2			2			2			2		
Diver	4			3	1		4			4		
Chief of the crew	3				3		3			3		
Merchants	10		1	3	5	2	11			11		
Fishermen	43	5		32	15	1	44	2	1	48		

Question 14(c)(i): Generally, are the boat engines properly handled and maintained by the enginemen?

TABLE 3 continued

KEDAI BULUH

	October 1978			January 1979			April 1979			July 1979		
	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know
	Ketua Kampong	1			1			1			1	
Traditional Healer	1			1			1			1		
Pilot	4	1		5			5			5		
Owner of fishing boat	4			3	1		1	3		1	3	
Owner of fishing gear	2			2			2			2		
Diver	4			4			4			4		
Chief of the crew	3			1	2		2	1			3	
Merchants	11			9	1	1	5	6		8	2	1
Fisherman	46	2		37	11		32	15	1	35	12	1

Question 14(c)(ii): Do you think that some of the engine troubles could be avoided if the enginemen had more experience or know more about boat engines?

TABLE 3 continued

KEDAI BULUH

	October 1978			January 1979			April 1979			July 1979		
	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know	Yes(R)	No	Don't know
	Ketua Kampong	1			1				1			1
Traditional Healer	1				1			1			1	
Pilot	4	1		5			5			5		
Owner of fishing boat	3	1		3	1		3	1		4		
Owner of fishing gear	2			2				2		2		
Diver	3	1		1	3			3		4		
Chief of fishing crew	3			3			1	2		3		
Merchants	7	4		5	4	2	6	5		10		1
Fisherman	40	5	3	39	9		32	15	1	38	9	1

Question 3 (a): When comparing September 77/78 - December 77/78 - March 78/79^x)
July 78/79, do you think the amount of fish caught has:

TABLE 3 continued

PANGKOR

	1/September 77/78				2/December 77/78			
	Gone down	Unchanged	Gone up	Don't know	Gone up	Unchanged	Gone up	Don't know
Ketua Kampong	1	-	-	-	1	-	-	-
Taditional Healer	1	-	-	-	1	-	-	-
Administrator 1	-	1	-	-	-	-	1	-
Administrator 2	-	1	-	-	1	-	-	-
Pilot	3	2	-	-	5	-	-	-
Owner of fishing boat	-	4	1	-	5	-	-	-
Owner of fishing gear	5	-	-	-	5	-	-	-
Diver	1	3	1	-	5	-	-	-
Chief of the crew	4	1	-	-	5	-	-	-
Wholesaler	1	1	1	-	3	-	-	-
Fishmonger	4	1	-	-	4	1	-	-
Sundry shop owner	2	-	1	1	2	1	-	1
Fisherman	22	15	3	-	39	1	-	-

x) No control information available

Question 4 (b): Has the number of boats going out fishing during the past quarter

TABLE 3 continued

PANGKOR

	1/July-Sept.1978				2/Oct.-December 1978				3/January-March 1979				4/April-June 1979			
	Un- Increase	changed	Gone down	Don't know	Increased	Un- changed	Gone down	Don't know	Increased	Un- changed	Gone down	Don't know	Increased	Un- changed	Gone down	Don't know
Ketua Kampong	1	-	-	-	-	1	-	-	-	1	-	-	1	-	-	-
Traditional Healer	-	-	1	-	-	-	1	-	1	-	-	-	-	1	-	-
Fishery Officer	1	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-
Majikan Officer	-	1	-	-	-	-	1	-	-	1	-	-	-	1	-	-
Pilot	2	1	2	-	1	2	2	-	1	3	-	1	3	2	-	-
Owner of fishing boat	2	3	-	-	-	2	3	-	1	4	-	-	1	4	-	-
Owner of fishing gear	4	1	-	-	1	1	3	-	1	4	-	-	3	2	-	-
Diver	1	2	2	-	-	2	3	-	1	4	-	-	1	4	-	-
Wholesaler	1	2	-	-	-	1	2	-	-	1	1	1	2	1	-	-
Chief of the crew	4	1	-	-	-	1	4	-	-	5	-	-	3	2	-	-
Fisheonger	3	2	-	-	-	1	4	-	-	4	1	-	1	3	1	-
Sundry shop owner	1	1	1	1	1	-	2	1	1	1	1	1	2	1	-	1
Fisherman	16	16	8	-	2	13	25	-	7	29	4	13	27	41	-	-

Question 5(c): Has there been an influx of workers from other areas during the past 3 months?

TABLE 3 continued

PANGKOR

Occupation	1/July-September 78			2/October-December 78			3/January-March 79			4/April-June 79		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Ketua Kampong	1	-	-	1	-	-	-	1	-	-	1	-
Traditional Healer	1	-	-	1	-	-	1	-	-	1	-	-
Employment Officer	-	1	-	1	-	-	-	1	-	-	1	1
Pilot	3	2	-	1	4	-	3	2	-	1	3	1
Owner of fishing boat	1	4	-	-	5	-	1	4	-	-	5	-
Owner of fishing gear	4	1	-	-	5	-	1	4	-	2	3	-
Diver	4	1	-	-	5	-	3	2	-	1	4	-
Chief of the crew	3	2	-	1	4	-	3	2	-	1	4	-
Merchants	5	5	1	2	9	1	3	8	1	3	8	1
Fisherman	23	14	3	6	34	-	18	21	1	8	32	-

Question 14(a) Would it make a difference in the amount of fish and in the type of fish caught if :

(i) More fishermen knew how to trace the various types of fish

TABLE 3 continued

PANGKOR

Occupation	1/October 1978			2/January 1979			3/April 1979			4/July 1979		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Ketua Kampong	1	-	-	-	1	-	1	-	-	1	-	-
Traditional Healer	-	1	-	-	1	-	-	1	-	1	-	-
Pilot	0	2	-	2	3	-	1	4	-	1	4	-
Owner of fishing boat	3	2	-	3	2	-	5	-	-	-	5	-
Owner of fishing gear	2	3	-	4	1	-	1	4	-	1	4	-
Diver	3	2	-	3	2	-	5	-	-	-	5	-
Chief of the crew	2	3	-	2	3	-	1	4	-	1	4	-
Merchants	8	3	1	7	4	1	7	4	1	1	10	1
Fisherman	23	17	-	18	22	-	20	17	3	4	36	-

(ii) Those now tracing the fish had more experience in tracing and distinguishing between the types when tracing

TABLE 3 continued

PANGKOR

Occupation	1/October 1978			2/January 1979			3/April 1979			4/July 1979		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Ketua Kampong	1	-	-	1	-	-	-	1	-	1	-	-
Traditional Healer	-	1	-	-	1	-	1	-	-	1	-	-
Pilot	4	1	-	2	3	-	4	1	-	4	1	-
Owner of fishing boat	3	2	-	3	2	-	5	-	-	-	5	-
Owner of fishing gear	4	1	-	4	1	-	2	3	-	2	2	1
Diver	4	1	-	3	2	-	4	1	-	2	3	-
Chief of the crew	3	2	-	2	3	-	1	4	-	2	3	-
Merchants	9	2	1	8	3	1	10	-	2	7	4	1
Fisherman	29	11	-	21	19	-	28	12	-	9	31	-

Question 14 (b)(i) Generally are the helmsmen able to direct the boat to and from the fishing grounds without frequently making mistakes?

TABLE 3 continued

PANGKOR

Occupation	1/October 1978			2/January 1979			3/April 1979			4/July 1979		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Ketua Kampong	-	1	-	1	-	-	-	1	-	1	-	-
Traditional Healer	-	1	-	1	-	-	1	-	-	1	-	-
Pilot	4	1	-	5	-	-	5	-	-	5	-	-
Owner of fishing gear	5	-	-	4	1	-	3	1	1	5	-	-
Owner of fishing boat	5	-	-	5	-	-	4	-	1	5	-	-
Oilyer	5	-	-	4	1	-	5	-	-	5	-	-
Chief of the crew	5	-	-	3	2	-	4	1	-	5	-	-
Merchants	11	-	1	9	2	1	9	2	1	11	-	1
Fisherman	36	4	-	33	7	-	34	5	1	39	1	-

Question 14(b)(ii): Under normal weather conditions are most of the helmsmen able to lay down a course so the fishing grounds and the shore are reached without delays?

TABLE 3 continued

PANGKOR

Occupation	1/October 1978			2/January 1979			3/April 1979			4/July 1979		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Ketua Kampong	1	-	-	1	-	-	-	1	-	1	-	-
Traditional Healer	-	1	-	1	-	-	1	-	-	1	-	-
Pilot	5	-	-	4	1	-	5	-	-	5	-	-
Owner of fishing boat	5	-	-	5	-	-	4	1	-	5	-	-
Owner of fishing gear	5	-	-	4	1	-	4	-	1	5	-	-
Diver	5	-	-	4	1	-	5	-	-	5	-	-
Chief of the crew	4	1	-	3	2	-	5	-	-	5	-	-
Merchants	9	2	1	8	3	1	8	3	1	11	-	1
Fisherman	40	-	-	30	10	-	34	3	3	40	-	-

TABLE 4

The Key Informants by 5 occupational groups and the Combinations in their Choice of Answers to Questions:

20.	The Employment Situation in General:)				
	- Many could not find work)	A			
	- Some could not find work)				
	- Almost all could find work)				
)				
)		4(a)iii Are there:		
)		- too few)	
18.	Differentials between Actual and Optimal crew sizes)		- enough)	
	- Actual Optimal)	B	- more than required)	
	- Actual = Optimal))
	- Actual = Optimal))
))

A	1/July-September 1978	2/October-December 1978	3/January-March 1979	4/April-June 1979
<p>4(a)iii: Enough</p> <p>20: Don't know</p>	<p>3 - fishermen's wives</p> <p>3 Total</p>	<p>4 - fishermen 2 - indirect observers</p> <p>6 Total</p>	<p>5 - pilots 8 - fishermen</p> <p>13 Total</p>	<p>1 - pilot 1 - fisherman 1 - indirect observer</p> <p>3 Total</p>
<p>4(a)iii: Enough</p> <p>20: Many could not find work</p>	<p>7 - indirect observers 10 - merchants 29 - fishermen 3 - boat owners 2 - direct observers 2 - gear owners 3 - diver 3 - chief of crew 1 - fisherman's wife</p> <p>60 Total</p>	<p>2 - indirect observers 3 - fishermen's wives 2 - gear owners 16 - fishermen 2 - chief of crew 1 - merchant</p> <p>26 Total</p>	<p>3 - indirect observers 2 - direct observers 29 - fishermen 4 - boat owners 9 - merchants 4 - divers 3 - chief of crew 1 - fisherman's wife</p> <p>55 Total</p>	<p>31 - fishermen 1 - indirect observer 2 - boat owners 11 - merchants 2 - direct observers 4 - pilots 4 - divers 2 - chief of crew 2 - fishermen's wives 1 - gear owner</p> <p>60 Total</p>
<p>4(a)iii: Enough</p> <p>20: Some could not find work</p>		<p>8 - fishermen 3 - merchants 2 - indirect observers 1 - boat owner 3 - fishermen's wives 1 - pilot</p> <p>18 Total</p>		<p>2 - indirect observers 2 - fishermen 2 - fishermen's wives</p> <p>6 Total</p>

continued

A	1/July-September 1978	2/October-December 1978	3/January-March 1979	4/April-June 1979
<p>4(a)iii: Enough</p> <p>20: Almost all could find work</p>	<p>3 - fisherman's wives 1 - indirect observer 5 - pilots 1 - merchant 9 - fishermen</p> <p>19 Total</p>	<p>2 - direct observers 2 - indirect observers 1 - boat owner 4 - divers 15 - fishermen 1 - chief of crew 2 - merchants 3 - pilots 1 - fisherman's wife</p> <p>31 Total</p>	<p>4 - fisherman's wives 3 - indirect observers 2 - gear owners 11 - fishermen</p> <p>20 Total</p>	<p>3 - indirect observers 1 - boat owner 1 - chief of crew 8 - fishermen 1 - gear owner</p> <p>14 Total</p>
<p>All other combinations</p>	<p>3 - indirect observers 3 - fisherman's wives 1 - diver 10 - fishermen 1 - boat owner</p> <p>18 Total</p>	<p>3 - indirect observers 3 - fisherman's wives 5 - merchants 5 - fishermen 2 - boat owners 1 - pilot</p> <p>19 Total</p>	<p>5 - indirect observers 5 - fisherman's wives 2 - merchants</p> <p>12 Total</p>	<p>4 - indirect observers 6 - fisherman's wives 6 - fishermen 1 - boat owner</p> <p>17 Total</p>
<p>B</p> <p>4(a)iii: Enough fishermen</p> <p>18: Actual crew size larger than optimal</p>	<p>5 - indirect observers 4 - pilots 2 - boat owners 3 - merchants 2 - gear owners 32 - fishermen 4 - divers 2 - chief of crew 3 - fisherman's wives</p> <p>57 Total</p>	<p>2 - indirect observers 2 - direct observers 4 - pilots 4 - boat owners 2 - gear owners 37 - fishermen 4 - divers 3 - chief of crew 6 - merchants 1 - fisherman's wife</p> <p>65 Total</p>	<p>4 - indirect observers 5 - pilots 3 - boat owners 9 - merchants 2 - gear owners 38 - fishermen 3 - divers 3 - chief of crew 2 - fisherman's wives</p> <p>69 Total</p>	<p>3 - indirect observers 2 - direct observers 5 - pilots 4 - boat owners 7 - merchants 2 - gear owners 41 - fishermen 4 - divers 3 - chief of crew 2 - fisherman's wives</p> <p>73 Total</p>

continued

6	1/July-September 1978	2/October-December 1978	3/January-March 1979	4/April-June 1979
4(a)iii: Enough fishermen 18: Don't know	3- indirect observers 2 - direct observers 1 - chief of crew 3 - merchants 7 - fishermen 4 - fishermen's wives 20 Total	5 - indirect observers 1 - pilot 3 - merchants 1 - fisherman 3 - fisherman's wives 13 Total	4 - indirect observers 2 - direct observers 2 - merchants 5 - fishermen's wives 13 Total	2 - indirect observers 2 - merchants 2 - fishermen 3 - fishermen's wives 9 Total
All other combinations	3 - indirect observers 1 - pilot 2 - boat owners 5 - merchants 3 - fishermen's wives 9 - fishermen 23 Total	4 - indirect observers 5 - fishermen's wives 10 - fishermen 1 - merchant 1 - boat owner 22 Total	1 - diver 10 - fishermen 3 - indirect observers 3 - fishermen's wives 1 - boat owner 18 Total	6 - indirect observers 2 - merchants 5 - fishermen's wives 5 - fishermen 18 Total

- XLIX -
SURVEY ROUND

PANGKOR

A	1/July-September 1978	2/October-December 1978	3/January-March 1979	4/April-June 1979
4(a)iii: Enough 20: Don't know		1 - fishermen's wife 1 Total		
4A(3): Enough 20: Many could not find work		1 - pilot 1 - gear owner 4 - merchants 5 - fishermen 2 - fishermen's wives 13 Total	1 - pilot 1 - chief of crew 2 - fishermen 4 Total	1 - fishermen 1 Total
4A(3): Enough 20: Almost all could find work	1 - indirect observer 5 - pilots 3 - boat owners 4 - gear owners 3 - divers 4 - chief of crew 8 - merchants 30 - fishermen 5 - fishermen's wives 63 Total	5 - indirect observers 1 - direct observer 4 - pilots 5 - boat owners 4 - gear owners 3 - divers 4 - chief of crew 7 merchants 33 - fishermen 3 - fishermen's wives 69 Total	9 - indirect observers 2 - direct observers 3 - pilots 5 - boat owners 5 - gear owners 3 - divers 3 - chief of crew 10 - merchants 36 - fishermen 8 - fishermen's wives 84 Total	6 - indirect observers 2 - direct observers 5 - pilots 5 - boat owners 4 - gear owners 5 - divers 5 - chief of crew 10 - merchants 39 - fishermen 6 - fishermen's wives 87 Total
All other combinations	9 - indirect observers 5 - fishermen's wives 2 - divers 10 - fishermen 4 - merchants 2 - direct observers 2 - boat owners 1 - gear owner 1 - chief of crew 36 Total	5 - indirect observers 1 - chief of crew 2 - divers 2 - fishermen 4 - fishermen's wives 1 - direct observer 1 - merchant 16 Total	1 - indirect observer 1 - pilot 2 - divers 2 - merchants 2 - fishermen's wives 2 - fishermen 1 - chief of crew 11 Total	4 - indirect observers 2 - merchants 4 - fishermen's wives 1 - gear owner 11 Total

SURVEY ROUND

PANGKOR

B	1/July-September 1978	2/October-December 1978	3/January-March 1979	4/April-June 1979
4(a)iii: Enough 18: Actual crew size smaller than optimal	2 - indirect observers 2 - boat owners 4 - gear owners 2 - divers 3 - chief of crew 6 - merchants 21 - fishermen 40 Total	2 - indirect observers 4 - pilots 5 - boat owners 4 - gear owners 4 - divers 3 - chief of crew 9 - merchants 32 - fishermen 63 Total	5 - indirect observers 1 - direct observer 2 - pilots 1 - boat owner 3 - gear owners 3 - chief of crew 5 - merchants 21 - fishermen 41 Total	5 - indirect observers 1 - direct observer 2 - pilots 5 - boat owners 2 - gear owners 3 - divers 3 - chief of crew 7 - merchants 32 - fishermen 1 - fishermen's wife 61 Total
4a(iii): Enough 18: Don't know	2 - indirect observers 1 - diver 2 - merchants 7 - fishermen 5 - fishermen's wives 17 Total	1 - gear owner 1 - diver 1 - merchant 7 - fishermen's wives 10 Total	2 - indirect observer 1 - gear owner 3 - divers 1 - merchant 1 - fishermen 7 - fishermen's wives 15 Total	4 - fishermen's wives 4 Total
All other combinations	11 - indirect observers 4 - merchants 12 - fishermen 5 - fishermen's wives 2 - chief of crew 1 - pilot 3 - boat owners 2 - divers 1 - gear owner 1 - direct observer 42 Total	8 - indirect observers 2 - merchants 3 - fishermen's wives 8 - fishermen 2 - direct observers 1 - pilot 2 - chief of crew 26 Total	3 - indirect observers 3 - fishermen's wives 6 - merchants 3 - pilots 1 - gear owners 4 - boat owners 2 - divers 18 - fishermen 2 - chief of crew 1 - direct observer 43 Total	5 - indirect observers 5 - merchants 5 - fishermen's wives 3 - gear owners 3 - pilots 8 - fishermen 1 - direct observer 2 - divers 2 - chief of crew 34 Total

Question 14(c)(i): Generally, are the boat engines properly handled and maintained by the enginemen?

TABLE 4 continued

PANGKOR

Occupation	1/October 1978			2/January 1979			3/April 1979			4/July 1979		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Ketua Kampong	1	-	-	1	-	-	1	-	-	1	-	-
Traditional Healer	1	-	-	1	-	-	1	-	-	1	-	-
Pilot	5	-	-	5	-	-	5	-	-	5	-	-
Owner of fishing boat	5	-	-	5	-	-	5	-	-	5	-	-
Owner of fishing gear	5	-	-	5	-	-	5	-	-	5	-	-
Diver	5	-	-	5	-	-	5	-	-	5	-	-
Chief of the crew	5	-	-	5	-	-	5	-	-	5	-	-
Merchants	11	-	1	11	-	1	11	-	1	11	-	1
Fisherman	40	-	-	40	-	-	40	-	-	40	-	-

14(c)(ii): Do you think that some of the engine troubles could be avoided if the engine-men had more experience or knew more about boat engines?

PANGKOR

TABLE 4 continued

Occupation	1/October 1978			2/January 1979			3/April 1979			4/July 1979		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Kebua Kempong	1	-	-	1	-	-	1	-	-	1	-	-
Traditional healer	1	-	-	1	-	-	1	-	-	1	-	-
Pilot	5	-	-	3	1	1	4	1	-	5	-	-
Owner of fishing boat	4	1	-	3	1	1	4	1	-	5	-	-
Owner of fishing gear	4	-	1	4	-	1	5	-	-	5	-	-
Diver	4	-	1	4	1	-	4	1	-	5	-	-
Chief of fishing crew	4	-	1	5	-	-	3	1	1	4	-	1
Merchants	10	1	1	10	1	1	9	2	1	10	-	2
Fisherman	35	1	4	32	4	4	37	1	2	39	-	1

TABLE 3

The Key Informants' Answers to Non-Biased Questions by 5, (i)-(v), Groups of Key Informants

KEDAI BULOH

Question	(i)			(ii)			(iii)			(iv)			(v)		
	R	W	DK	R	W	DK	R	W	DK	R	W	DK	R	W	DK
2	37	0	7	7	1	0	49	1	2	294	2	0	40	0	0
3 (c)	37	1	0	0	9	0	52	0	0	294	2	0	40	0	0
6	39	0	5	8	0	0	52	0	0	256	0	0	39	1	0
8 (b)	42	0	6	6	0	0	52	0	0	256	0	0	34	0	2
9 Fish processing	26	13	7	8	0	0	67	5	0	161	53	2	15	22	3
9 Farming	14	20	10	8	0	0	31	21	0	134	94	28	9	18	13
9 Coconut Farming	16	16	12	6	2	0	35	18	0	150	75	31	16	3	13
11 (a)	23	13	8	1	7	0	27	21	4	13	131*	12	11*	25*	4*
13 (i)	16	23	5	3	5	0	18	31	3	101	130	25	9	19	12
13 (ii)	33	4	7	6	0	0	40	8	4	201	25	29	28	1	11
13 (iii)	36	4	6	8	0	0	44	5	3	227	16	13	31	0	9
14 (d)(i)	29	0	15	7	1	0	46	2	4	240	13	3	24	3	13
14 (d)(ii)	31	0	13	7	1	0	41	5	6	294	17	5	27	0	13
15 (i)	35	0	8	7	0	1	50	0	2	251	0	5	31	0	9
15 (ii)	36	0	8	8	0	0	51	0	1	294	0	2	33	0	7

TABLE 5 continued

KEDAI BULOH

Question	(i)			(ii)			(iii)			(iv)			(v)		
	R	W	DK	R	W	DK	R	W	DK	R	W	DK	R	W	DK
16 (iii)	34	0	10	8	0	0	51	0	1	248	2	5	29	0	11
16 (iv)	32	2	10	8	0	0	52	0	0	224	10	22	25	0	14
16 (v)	34	0	10	8	0	0	52	0	0	252	0	4	23	0	17
Total abs.	94	96	153	126	17	1	793	117	30	3,613	609	186	469	99	154
%	69	12	19	89	12	0	84	13	3	83	13	4	65	14	21
Total corr. abs.	504	60	140	122	5	0	764	65	23	3,699	447	149	449	54	138
%	72	9	20	96	4	0	89	8	3	86	10	4	70	8	22

*In respect of this question the housewives may be classified as group (iv) key informants.

The Key Informants' Answer to Non Biased Questions by 5, (i)-(v), Group of Key Informants

PANGKOR

Table 5

Questions	(i)			(ii)			(iii)			(iv)			(v)		
	R	W	DK	R	W	DK	R	W	DK	R	W	DK	R	W	DK
2	36	0	4	8	0	0	47	0	1	259	1	0	39	0	1
3 (c)	23	9	8	7	1	0	34	11	3	225	34	1	31	6	3
6	35	0	5	8	0	0	47	0	1	260	0	0	39	1	0
8 (b)	35	0	5	8	0	0	47	0	1	259	0	1	40	0	0
9 Fish processing	33	1	6	8	0	0	47	0	1	258	2	0	40	0	0
9 Farming	39	0	1	8	0	0	47	0	1	260	0	0	40	0	0
9 Coconut Farming	29	3	8	7	1	0	38	4	6	223	22	15	33	3	4
9 Cottage Industry	30	0	10	7	0	1	40	0	8	220	6	34	33	0	7
9 Retail Trade	14	19	7	2	6	0	18	29	1	142	113	5	23	17	0
9 Stay Idle	15	19	6	5	3	0	22	22	4	89	168	3	14	26	0
9 Emigrate	29	3	8	7	1	0	38	4	6	223	22	15	33	3	4
11 (a)	0	36	4	0	8	0	0	48	0	2	258	0	0	40	0
13 (i)	15	21	4	2	6	0	15	31	2	93	166	1	14	25	1
13 (ii)	34	2	4	7	1	0	45	1	2	244	13	3	36	3	1

TABLE 5 continued

Questions	(i)			(ii)			(iii)			(iv)			(v)		
	R	W	DK	R	W	DK	R	W	DK	R	W	DK	R	W	DK
13 (iii)	35	1	4	8	0	0	45	0	2	256	1	3	36	0	4
14 (d) (i)	20	12	8	3	5	0	28	14	6	192	65	3	24	6	10
14 (d) (ii)	30	2	8	6	2	0	35	4	8	230	11	19	28	0	12
16 (i)	33	0	7	8	0	0	47	0	1	258	0	2	35	0	5
16 (ii)	34	0	6	8	0	0	48	0	0	260	0	0	39	0	1
16 (iii)	35	0	5	8	0	0	46	0	2	260	0	0	34	0	6
16 (iv)	35	0	5	8	0	0	46	0	2	258	0	2	35	0	5
16 (v)	35	0	5	8	0	0	47	0	1	260	0	0	40	0	0
Total abs.	624	128	128	141	34	1	829	168	59	4,731	882	107	686	130	64
%	70	15	15	80	19	1	78	16	6	83	15	2	78	15	7
Total Corr. abs.	609	71	120	139	20	1	814	89	57	4,636	458	106	672	65	63
%	76	9	15	87	12	1	85	9	6	89	9	2	84	8	8

TABLE 6

KECAI BULUH

The Distribution of Answer by some of the Key Informants' Characteristics and the Quality of the Answers for Three groups (a-c)

- a. Questions requesting indications of orders of magnitudes (Ref. questions 2, 8 (b), 11 (a) 17, 19.)

	Right	Wrong	D.K.	Total*
<u>Age</u>	%	%	%	%
15 - 19	70	30	-	100
20 - 24	75	25	-	100
25 - 29	69	18	13	100
30 - 34	69	25	6	100
35 - 39	71	21	9	100
40 - 44	69	27	5	100
45 - 49	68	26	5	100
50 - 54	65	28	7	100
50+	70	27	3	100
<u>Educational Attainment</u>				
No Formal Education	70	26	4	100
Primary	69	26	4	100
Lower Secondary	67	25	8	100
Secondary	58	15	27	100
Upper Secondary	-	-	-	-
Tertiary	64	15	21	100
<u>Labour Force Status</u>				
Employed full-time	68	25	6	100
Employed part-time	72	26	2	100
Unemployed	63	32	5	100
Outside Labour Force	67	19	14	100
<u>Employment Status</u>				
Employer	73	27	-	100
Employee	69	22	8	100
Own Account Worker	68	27	4	100
Unpaid Family Worker	68	19	13	100

* The total is rounded, as no decimals are indicated.

TABLE 6 continued

KEDAI BULUH

- b. Questions requesting qualitative information
(non-numerical descriptions of certain features
in the community)
(Ref. questions 1(a), 1(b) 3(a), 3(c), 4(b) 5(c),
6, 7, 8(b), 9, 10, 12, 13, 15)

	Right	Wrong	D.K.	Total*
	%	%	%	%
<u>Age</u>				
15 - 19	59	36	5	100
20 - 24	68	30	2	100
25 - 29	55	31	14	100
30 - 34	64	26	10	100
35 - 39	63	27	11	100
40 - 44	72	28	-	100
45 - 49	65	29	6	100
50 - 54	63	29	8	100
55+	65	31	5	100
<u>Educational Attainment</u>				
No Formal Education	67	28	5	100
Primary	65	30	5	100
Lower Secondary	55	27	18	100
Secondary	49	25	26	100
Upper Secondary	-	-	-	-
Tertiary	49	25	25	100
<u>Labour Force Status</u>				
Employed full-time	65	29	6	100
Employed part-time	67	32	1	100
Unemployed	64	28	8	100
Outside Labour Force	48	19	33	100
<u>Employment Status</u>				
Employer	67	33	-	100
Employee	64	28	8	100
Own Account Worker	66	30	4	100
Unpaid Family Worker	50	19	31	100

* The total is rounded, as no decimals are indicated.

TABLE 6 continued

KEDAI BULUH

c. Questions requesting Opinions
 (Ref. questions: 14(a), 14(b), 14(c), 14(d), (15))

	Right	Wrong	D.K.	Total *
<u>Age</u>	%	%	%	%
15 - 19	73	25	1	100
20 - 24	70	25	5	100
25 - 29	64	24	12	100
30 - 34	64	26	10	100
35 - 39	63	25	12	100
40 - 44	66	26	8	100
45 - 49	66	27	7	100
50 - 54	65	25	10	100
55+	65	27	8	100
<u>Educational Attainment</u>				
No Formal Education	65	27	8	100
Primary	67	26	7	100
Lower Secondary	61	24	16	100
Secondary	61	21	18	100
Upper Secondary	-	-	-	-
Tertiary	55	22	23	100
<u>Labour Force Status</u>				
Employed full-time	10	66	26	100
Employed part-time	65	27	8	100
Unemployed	71	28	2	100
Outside Labour Force	58	24	17	100
<u>Employment Status</u>				
Employer	73	27	-	100
Employee	69	22	8	100
Own Account Worker	68	27	4	100
Unpaid Family Worker	68	19	13	100

* The total is rounded, as no decimals are indicated.

TABLE 6

PANGKOR

The Distribution of Answers by some of the Key Informants Characteristics and the Quality of the answers for three groups (a-c) of Questions.

(a) Questions requesting indications of orders of magnitudes
(Ref. questions: 2, 8(b), 11(a), 17, 19)

Age	Right	Wrong	D.K.	Total
	%	%	%	%
15 - 19	90	8	2	
20 - 24	83	9	7	
25 - 29	91	8	-	
30 - 34	91	8	1	
35 - 39	81	8	11	
40 - 44	88	11	1	
45 - 49	92	3	5	
50 - 54	93	7	-	
55+	88	12	-	
Educational Attainment				
No formal education	82	14	4	
Primary	90	8	2	
Lower secondary	91	9	1	
Secondary	85	5	9	
Upper secondary	-	-	-	
Tertiary	67	6	32	
Labour Force Status				
Employed full-time	89	6	5	
Employed part-time	89	10	2	
Unemployed	-	-	-	
Outside Labour Force	87	7	6	
Employment Status				
Employer	92	8	1	
Employee	77	2	21	
Own Account Worker	89	9	1	
Unpaid Family Worker	84	10	6	

TABLE 6 continued

Bangkok

(b) Questions requesting qualitative information (non-numerical descriptions of certain features in the community).

Ref. questions 1(a), 1(b), 3(a), 3(c), 4(b), 5(c), 6, 7, 8(b), 9, 10, 12, 13, 16.

Age	Right	Wrong	D.K.	Total
	%	%	%	%
15 - 19	72	28	-	
20 - 24	63	26	11	
25 - 29	71	25	4	
30 - 34	72	21	7	
35 - 39	61	20	20	
40 - 44	75	23	2	
45 - 49	66	25	10	
50 - 54	68	30	2	
55+	70	29	1	
Educational Attainment				
No formal education	63	23	14	
Primary	70	24	5	
Lower Secondary	72	23	5	
Secondary	63	25	11	
Upper Secondary	-	-	-	
Tertiary	40	23	37	
Labour Force Status				
Employed full-time	68	24	8	
Employed part-time	72	25	3	
Unemployed	-	-	-	
Outside Labour Force	50	20	31	
Employment Status				
Employer	71	26	2	
Employee	56	21	23	
Own Account Worker	72	24	4	
Unpaid Family Worker	51	27	23	

TABLE 6 continued

PAN-KOR

(c) Questions requesting Opinions

(Ref. questions: 14(a), 14(b), 14(c), 14(d), (15))

Age	Right	Wrong	D.K.	Total
	%	%	%	%
15 - 19	71	26	3	
20 - 24	72	20	8	
25 - 29	73	19	3	
30 - 34	76	20	4	
35 - 39	71	19	10	
40 - 44	79	20	1	
45 - 49	74	21	5	
50 - 54	78	21	1	
55+	80	20	1	
Educational Attainment				
No formal education	76	21	3	
Primary	2	77	20	
Lower Secondary	76	21	3	
Secondary	73	20	7	
Upper Secondary	-	-	-	
Tertiary	51	15	34	
Labour Force Status				
Employed Full-time	74	20	5	
Employed Part-time	2	77	20	
Unemployed	-	-	-	
Outside Labour Force	72	20	8	
Employment Status				
Employer	92	8	1	
Employee	77	2	21	
Own Account Worker	1	89	9	
Unpaid Family Worker	84	10	6	

LIST OF KEY INFORMANTS' OCCUPATIONS

1. Pegawai Daerah
District Officer
2. Wakil Rakyat Kawasan Negeri
Local State Assemblyman
3. Penggawa/Penghulu
4. Ketua Kampong
Village Headman
5. Guru Besar
Headmaster
6. Imam
Religious Head
7. Pegawai Kesihatan Daerah
District Health Officer
8. Pawang
Traditional Healer
9. Pegawai Perikanan
Fishery Officer
10. Pegawai Majuikan
Majuikan Officer
11. Pegawai Perikanan
Fishery Officer
12. Pegawai Koperatif
Cooperative Officer
13. Juragan
Pilot
14. Pemilik Bot
Owner of Fishing Boat
15. Pemilik Alat Tangkapan Ikan
Owner of Fishing Gear
16. Juruselam
Diver
17. Kepala
Chief of the Crew
18. Pemborong
Wholesale
19. Penjual Ikan/Peraih
Fishmonger
20. Pekedai Runcit
Sundry Shop Owner

21. Nelayan
Fisherman
22. Isteri Nelayan
Wife of Fisherman

PILOT KEY INFORMANTS' SURVEY - 1978-79.
(An I.L.O. Project)

Respondent's Name: Interviewer's Name:

Address: Date of Interview :

..... Time of Interview: FromTo.....

A - Personal Particulars of Key Informant

1. Serial Number of Respondent:

2. Sex: Male..... 1 Female..... 2

3. Age (As at last birthday in completed years)

4. Race: Malays..... 1 Indians..... 3

Chinese..... 2 Others 4

5. Marital Status: Never Married..... 1 Widowed..... 3

Married..... 2 Divorced/Separated....4

6. Educational Level: No Formal Education...1 Secondary.....4
(Form 4-5)

Primary (Std. 1-6)..... 2 Upper Secondary.....5
(Form 6)

Lower Secondary..... 3 Tertiary.....6
(Form 1-3) (University/College)

7. Labour Force Status: Employed (Full-time)..... 1

Employed (Part-time)..... 2

Unemployed..... 3

Outside Labour Force..... 4
(viz. Students, Housewives and Retired Persons)

If the key informant is unemployed or outside Labour Force leave questions 8-10 blank and proceed to Section B

8. Principal Occupation:

(a) What is your occupation.....

(b) Describe your duties/nature of your work.....

.....

.....

9. Employment Status: Employer..... 1 Own-Account Worker..... 3
Employee..... 2 Unpaid Family Worker... 4

5

If the key informant is an employee proceed to question 10, if not leave 10 blank and proceed to Section B.

10. Industry:

- (a) Name and address of establishment where you work:.....
.....
- (b) Main activities/products of this establishment:.....
.....

--	--	--

B - General Particulars Concerning the Labour Market
and Manpower Utilization in the Fishing Community of

(From All Key Informants)

(Fill in)

- 1.(a) What is the main source of livelihood for most of the households in this community?
- | | |
|---|---|
| Fishing..... | 1 |
| Fish processing..... | 2 |
| Farming (other than coconut)..... | 3 |
| Coconut Farming/Coconut-based industries..... | 4 |
| Cottage Industries (including batik, kain songkit, and silverware)..... | 5 |
| Boat-building..... | 6 |
| Retail trade..... | 7 |
| Repair of boats and fishing gear..... | 8 |
| Others (Please specify)..... | 9 |
| Don't know..... | 0 |



If the key informant has stated an activity proceed to 1(b). If he has replied "Don't know" proceed to Question 2, i.e. leave 1(b) blank.

- 1.(b) Apart from the main activity mentioned, what other important activities of those stated above, are carried out here?

- (i)
- (ii)
- (iii)

2. What proportion of all the households in the community depends on fishing as their main source of income?

- | | | | |
|---------------------------|---|---------------------|---|
| $\frac{1}{2}$ | 1 | $\frac{1}{2}$ | 3 |
| about $\frac{1}{2}$ | 2 | Don't know..... | 0 |



- 3.(a) When comparing.....to.....do you think the amount of fish caught has.....?

- | | | | |
|------------------------|---|------------------|---|
| Gone down..... | 1 | Gone up | 3 |
| Remained unchange..... | 2 | Don't know | 0 |



(b) When comparing.....to.....do you think that in general a fisherman's earnings from fishing have.....?

Gone down 1 Gone up 3

Remained unchanged 2 Don't know 0

(c) Through whom is the catch generally sold?

Through private buyers ... 1 Through both 3

Through co-ops..... 2 Don't know 0

4.(a) In the past 3 months has there been enough people, with sufficient experience to be employed, to fishing?

i Engine-men Too few .. 1 Enough .. 2 More than required .. 3

ii Helmsmen Too few .. 1 Enough .. 2 More than required .. 3

iii Fishing crew Too few .. 1 Enough .. 2 More than required .. 3

(For each of i-iii above apply 0 if the key informant answers "Don't know")

(b) Has the number boats going out fishing during the past quarter.....?

Increase 1 Gone down 3

Remained unchanged 2 Don't know 0

If the answer to 4(a) iii above is: too few (code 1) ask 5(a) below.
If the answer to 4(a) iii is: more than required (code 3) ask 5(b).
If the answer is: enough (code 2) leave 5(a) and (b) blank and proceed to 5(c).

5.(a) In the past 3 months, if there was difficulty in obtaining the required labour for fishing, was it because

Better wages in other jobs in this area 1

Better wages in the same type of job outside this area 2

Better wages in other jobs outside this area 3

Other reasons (Please specify) 4

Don't know 0

(b) If there has been more people than required to go out fishing during the past 3 months what is the reason?

Better catch 1

Higher price of catch 2

Fewer alternative job opportunities 3
 Other reasons (Please specify) 4
 Don't know 0

(c) Has there been an influx of workers from other areas during the past 3 months?

Yes 1 No 2 Don't know 0

6. Where does most of the labour for the fishing industry come from?

This area 1 Another state 3
 Outside this area..... 2 (Specify).....
 (but within the state) Don't know 0

7. What is the race of the majority of the fishermen?

Malays..... 1 Indians 3
 Chinese 2 Others 4

8.(a) What is the age-group of the majority of the fishermen?
 (Make the key informant state an age range which may not cover more than 20 years but any range less)

.....

(b) Usually how long does the majority of the fishermen remain in fishing?

Less than 5 years 1 Lifetime 3
 5-20 years 2 Don't know 0

Ask only (c) below if code 1 or 2 has been applied in (b) above, otherwise leave (c) blank and proceed to 9:

(c) What would the majority of the fishermen do after leaving the fishing industry?

.....

9. What does the majority of the fishermen do during the monsoon period?
 (Apply 1 for the activities to which the key informant replies "yes" and 2 for those to which he replies "no". In case of "Don't know" apply 0).

Fishing

- Fish processing
- Farming (other than coconut)
- Coconut Farming/Coconut-based industries
- Cottage Industries (including batik,kain songkit,and silverware).....
- Boat-building
- Retail trade
- Repair of boats and fishing gear
- House repair
- Stay idle
- Emigrate

10. What is the marital status of the majority of the fishermen?

- Never married 1
- Married 2
- Don't know 0

11.(a) If married, what is the most common family size?
(A family is the parents and their children)

- 2-3 1 7 and above 3
- 4-6 2 Don't know 0

(b) How many dependants does the majority of the families have?

- None 1 3-5 3
- 1-2 2 6 and above 4
- Don't know 0

12. What is the employment status of the majority of the fishermen?

Employee 1 Don't know 0

Own-Account Workers 2
(using own boats)

Own-Account Workers 3
(hiring boats from others)

13. What is the general educational level of the majority of the fishermen in the following age-groups?

i. 24 and below No Formal Education 1

Primary (Std. 1-6) 2

Lower Secondary 3
(Form 1-3)

Secondary and above 4
(Form 4 and above)

Don't know 0

ii. 25-39 (Use the codes in i)

iii. 40 and above (Use the codes in i)

14(a) Would it make a difference in the amount of fish and in the type of fish caught if:

(i) More fishermen knew how to trace the various types of fish?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")

(ii) Those now tracing the fish had more experience in tracing and distinguishing between the types when tracing?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")

(iii) The fishermen had more experience on or knew more about the handling of the fishing gear?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")

If the reply to (iii) above is "yes" (1) proceed to (iv) below, if the reply is "no" (2) or "Don't know" (0), proceed to 14(b).

(iv) Mention the type of gear where more experience in handling is most needed (state the types on the empty lines below):

.....
.....
.....
.....

- (b) (i) Generally, are the helmsmen able to direct the boat to and from the fishing grounds without frequently making mistakes?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")
- (ii) Under normal weather conditions are most of the helmsmen able to lay down a course so the fishing grounds and the shore are reached without delays.
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")
- (iii) Do most of the helmsmen know how to use a compass?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")

If the reply is yes (1) proceed to (iv) below, if "no" (2) or "Don't know" (0) proceed to 14(c).

- (iv) Do most of the helmsmen use a compass?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")
- (c) (i) Generally, are the boat engines properly handled and maintained by the enginemmen?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")
- (ii) Do you think that some of the engine troubles could be avoided if the enginemmen had more experience or knew more about boat engines?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")
- (d) Decisions on when to go fishing and when to return from fishing depend inter alia on how the weather is going to be
 - (i) Do those predicting the weather often make wrong forecasts?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")
 - (ii) Do they more often make wrong than correct forecasts?
(Insert 1 for "yes", 2 for "no" and 0 for "Don't know")

15. For each of the below mentioned activities state if you think that:-

- (a) the people engaged by them could earn more if they had more experience in their work so they could produce more or increase the quality of the products,
- or
- (b) even if the people were able to produce more or to increase the quality of the products, they would earn the same income as they do now.
(Against each activity insert 1 for (a),(2) for (b) and 0 for "Don't know" use the flash card for question 1(a))

- Fishing.....
- Fish processing.....
- Farming other than coconut).....

- Coconut Farming/Coconut-based industries.....
- Cottage Industries (including batik, kain songkit,
and silverware).....
- Boat-building.....
- Retail trade.....
- Repair of boats and fishing gear.....

16. Are the following trades usually performed by.....

- (i) Masonry Resident specialists.....1
- Resident but non-specialists.....2
- Non-resident specialists.....3
- Non-resident non-specialists.....4
- Don't know.....0

(ii) Carpentry (use the codes in (i))

(iii) General Mechanics (use the codes in (i))

(iv) General Electrical Work (use the codes in (i))

(v) Boat-building (use the codes in (i))

17. What was the average level of earnings through work outside the household (cash &/or kind) per fishermen for the month of.....?

- Less than \$50 1 \$150-\$199 4
- \$50-\$99 2 \$200 & above 5
- \$100-\$149 3 Don't know 0

18. Generally what is the labour utilization in terms of number of men per boat in the following categories?

(a)

(b)

Types of Fishing	Tonnage								Horse Power																
	10		11-25		26-50		51+		-4		5-9		10-19		20-39		40-59		60-79		80-99		100+		
	O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A	
i. Trawlers																									
ii. Purseine fish																									
iii. Purseine anchovy																									
iv. Gill/Drift net																									
v. Hand line																									
vi. Hand line																									
vii. Fish trap																									

O = Optimal, leave blank

A = Actual, insert key informants' answers Read instructions carefully. Fill in only in respect of the combinations.

Types of fishing - Tonnage/Horse Power which the key informant indicates - Start interviewing by asking the key informant of the types of fishing applied and the tonnage or horse power available. Apply only Horse power if the key informant cannot reply to questions implying tonnage.

19. In general, what was the weekly number of hours a fisherman spent?

(a) on sea for the month of.....?

- 19 1 40-49 4
- 20-29 2 50-59 5
- 30-39 3 60 & above 6
- Don't know 0

(b) on repairing gear and boat while ashore?

- 5 1 11-15 3
- 6-10 2 16-20 4
- 21 & above 5
- Don't know 0

20. During the past quarter, were there many residents who tried, but could not find work through which they could earn an income in cash or kind?

- Many could not find work 1
- Some could not find work 2
- Almost all could find work 3
- Don't know 0

21. Are the following amenities and services available here?
(Code 1 for "yes" and 2 for "no" and 0 for "Don't know")

- i. Piped-water
- ii. Electricity
- iii. Health clinics
- iv. Schools
- v. Places of worship
- vi. Market place
- vii. Public transport

viii. Telephone



22.(a) What types of public transport are available to the community?
(State the key informants' answers on the empty line, if he mentions types the legality of which there may be some doubt, they should also be stated).

(i)

(ii)

(iii)

(iv)

(v)

(b) Is the community adequately served by the public transport system?

Yes 1 No 2



C - Particulars from Selected

Types of Key Informants

1. From Fishermen

How much did you earn, all in all last month?

2. From Owners of fishing boats

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All in all, how many fishing boats do all the boatowners in this community possess?
(Don't know, insert DK in the boxes)

(a) Without motors

(b) With outboard motors

(c) With inboard motors

3. From owners of fishing gear

All in all how many fishing gear do all the gear owners in this community possess?
(Don't know, insert DK in the boxes)

(a) Trawler

(b) Purseine fish

(c) Purseine anchovy

(d) Grill/Drift net

(e) Hand line

(f) Long line

(g) Fish trap

4. From Fishery Officer and Majuikan Officer

(i) What is the total number of fishing boat owners?
(Don't know, insert DK in the boxes)

(a) One-man ownership:- No.of boats

No.of owners

(b) Joint-ownership:- No.of boats.....
 No.of ownerships

(ii) What is the total number of fishing gear owners?
 (Don't know, insert DK in the boxes)

(a) One-man ownership:- No.of gears
 No.of owners

(b) Joint-ownership:- No.of gears
 No.of ownerships

(iii) What is the total number of registered fishing boats in
 this area?
 (Don't know insert DK in the boxes)

(a) Without motors
 (b) With outboard motors
 (c) With inboard motors

(iv) Has the number of registered fishing boats increase or
 decreased

Increased 1
 Remained unchanged 2
 Decreased 3
 Don't know 0

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(v) Has the catch (amount) of fish landed over the past quarter?

Gone down 1
 Remained unchanged 2
 Gone up 3
 Don't know 0

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5. From Pegawai/Penghulu, Ketua Kampung and Imam

(a) What is the number of people performing pilgrimage last year
 from this area?
 (Don't know, insert DK in the box)

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(b) What is the number of students from this community who are
 attending Universities (local and foreign)?
 (Don't know, insert DK in the boxes)

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