

# RELOCATION PROGRAMMES FOR SURPLUS FISHERMEN IN MALAYSIA

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## Summary

The fishing sector in Malaysia is experiencing an excess of labour force in the inshore areas in relation to the limited fisheries resource potential. There is thus a need to formulate and implement manpower management programmes. The aim is to enable the surplus labour force to be channelled to other sectors of the economy, thereby allowing those remaining in fishing to get a better return from the available resource. At the same time rehabilitation and consolidation of the inshore fisheries can be carried out.

Programmes associated with the surplus labour in the inshore fisheries sub-sector are: registration of fishermen; boat buy-back scheme; credit scheme; and training in alternative employment and skills for fishermen. A committee on relocation of surplus fishermen was also set up.

There are several limitations to the fishermen relocation programme i.e., no element of compulsion is involved; there is competition for the limited places in the land resettlement schemes; there is job immobility due to such factors as lack of other skills and capital cost; and there is competition for the limited job opportunities available.

The reduction programme for excess fishermen is based on the number of fishing units which could be displaced from the inshore areas without affecting the total catch. There is an element of restructuring the industry which plans to phase out in stages the inefficient and damaging fisheries.

There are cases of successful fishermen resettlement programmes based on agricultural activities such as tobacco growing, padi growing and cage culture in Malaysia.

The essence of the exercise is to introduce elements of "push and pull" factors, thus discouraging fishermen from remaining in the industry and encouraging them to be siphoned off. At the same time the government realises that there are other important considerations such as the labour demand and supply in the other sectors.

## 1. Introduction

This paper describes the situation of surplus or under-employed fishermen in Malaysia; the various programmes of the government to minimize the problem of excess labour in the fishing sector; the limitations to success; identification of the surplus fishermen; and case studies of specific resettlement projects.

## 2. Malaysia's Surplus Fishermen

2.1. Malaysia being a developing country is experiencing a situation of lop-side development where certain sectors of the economy do not have a sufficient number of labour force, while others have excess. One example of the latter sector is the fishing industry. The labour force in the fishing industry is often associated with the following characteristics:

- (a) Source of employment for young school leavers of the fishing villages;

- (b) Little skill is required to go fishing;
- (c) Lack of other alternative/supplementary employment in the vicinity of the fishing villages;
- (d) Low income level;
- (e) Low productivity; - and
- (f) Under-utilized employment time.

These characteristics to a large extent contribute to the existence of surplus labour or in another term "underemployed labour".

- 2.2. To conceptualize the underemployment situation in the fishing sector of Malaysia, it is necessary to describe the relationship between production of labour/capital and resource, which is such that the scarce fish resources are being competed for as a result of the capital or labour abundant nature of the fishing sector. The resource situation in the inshore areas is depleting and the catch rate per hour is deteriorating as evidenced by research surveys carried out by the Department of Fisheries. They have shown that in certain parts of the country the catch rate decreased from 515.6 kg/hour in 1970 to only 143.8 kg/hour in 1981. This encourages a larger fishing effort by fishermen resulting in low marginal productivity.
- 2.3. Further evidence is shown by the increasing trend in the fishing hours and hauls of the trawlers in Malaysia, from 6.5 hours and 2.2 hauls per day in 1981 to 7.5 and 2.7 respectively in 1985. However the average catch per trawler during those two periods decreased from 53 mt to 45 mt. Likewise the average for the drift netter also decreased from 4.3 mt to 3.2 mt.
- 2.4. The size of the fishing labour force in Peninsular Malaysia was increasing at an average rate of 1% per year between 1972 and 1984 or in absolute terms from 69,252 persons in 1972 to 76,368 in 1984. The industry cannot sustain any further growth in the number of fishermen without taking into consideration its effect on the socio-economic conditions of the fishing labour force.
- 2.5. The point that is of crucial importance is that some fishermen seem to be working full time but their incomes are very much below the poverty level.\* On the other hand, not everyone in the labour force is gainfully employed, with the result that employment of these fishermen does not utilise their full capacity, and their productivity is lower than it would be in some other occupation. However, what is more appropriate in this case is the existence of *invisible underemployment* which is usually defined to include all those fishermen whose earnings fall below the poverty level.
- 2.6. The labour situation in the fishing sector is aggravated by the presence of relatively large numbers of efficient gears like that of the trawlers and purse-seiners in addition to the inefficient scoop or drag nets. Between them, the former constituted about 16.5% of the total number of gear in Peninsular Malaysia in 1985. The nature of the operation of the trawlers is such that it has led to a situation of over-capitalization in relation to available resources. The fishing sector is thus not in a position to sustain any further increase in effort without causing an adverse effect on the marginal productivity of labour.
- 2.7. In summary, the fishing industry in Malaysia has several important features, i.e..
  - (a) the amount of fishing effort, measured in units of boats and gear, is in excess of that required for maximum sustainable yield of the resources;
  - (b) the existence of such fisheries is damaging the resources
  - (c) there are more fishermen than the fishing industry can support;
  - (d) the level of income of the surplus fishermen is very much below the poverty level.

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\* Defined as the minimum level of income to maintain a "decent" standard of living for a household of 5.6 persons.

The ultimate aim is therefore to reduce the amount of fishing effort (units) and fishermen, who are working for very low returns due to the constraints of limited fish resources, low prices and poor marketing systems. In such cases *they could be moved to other sectors of the economy without causing a decline in the rate of production in the fishing sector*, thus affording those fishermen left in the industry a bigger share of the returns.

### 3. Development Guidelines and Programmes

- 3.1. The National Agricultural Policy spells out clear development guidelines for the fisheries sector, e.g.: “Fish is another source of protein and the country’s fish requirement will be met through the use of modern methods to fully exploit the fishery resource; off-shore fishing will be stepped up through the utilization of both local and foreign expertise and the setting up of adequate fishing fleets.....”
- 3.2. An explanation of the broad guidelines is necessary at this juncture. One important aspect which needs some clarification is regarding the guideline on the “use of modern methods”. In the context of the Malaysian fishing sector, it does not refer to introduction of intensive mechanization of the fishing operation, for it is already adequate at the production level. It refers, in particular, to proper selection and regulation of certain fisheries which are deemed to be economically viable. Furthermore, what is more relevant here is the application of certain appropriate technology which is useful in the pre-harvest and post-harvest operations in order to increase their productivity and value. In this respect the strategies adopted to siphon-off some of the under-employed fishermen are very much in line with the guideline to introduce “modern methods” so that the industry is less labour intensive, using appropriate technology and having economical and nondamaging fisheries. Furthermore the success of the resettlement programmes depends largely on the success of the government in introducing better technology at pre-harvest or post-harvest ends of the fishing operation, and to subsequently ensure at least a constant level of production.
- 3.3. The fishing labour force provided work for some 99,208 fishermen in 1985, or 2% of the total labour force in Malaysia. Development efforts in the fisheries sector have, to some extent, brought about significant improvements in the standard of living as evidenced by the decline in the incidence of poverty within the sector, in Peninsular Malaysia from 73.2% in 1970 to 27% in 1986. However, the rate of exploitation of the fisheries resources is not conducive to a sustained growth. Some 80% of the marine fish are caught within the inshore areas of the Malaysian waters, which also support some 90% of the fishing population. This concentration of activities in the inshore areas has led to a situation of overfishing. The inshore resources are not in a position to take any further increase in fishing effort. The total catch in Peninsular Malaysia is beginning to show a decreasing trend; from 570,523 mt in 1983, to 481,641 in 1984 and 462,861 in 1985, and has adversely affected the livelihood of the fishing community and productivity of the sector.
- 3.4. The situation thus poses several policy implications. One of the urgent tasks of the government is to lay down effective conservation programmes to protect the breeding grounds and nurseries and prevent indiscriminate destruction of immature fish. There is also an urgent need to plan the manpower requirement in the fishing sector. Thus, one of the approaches adopted by the government is to consolidate, rehabilitate and manage the inshore fisheries and to siphon off “surplus fishermen” to other economic activities. For those fishermen remaining in the industry, adequate fisheries support services in the form of fisheries extension, training, research and marketing will be provided.
- 3.5. The *specific programmes* associated with reducing the number in the fishing labour force are:
  - (a) *Registration of fishermen* in order to limit and control the entry of labour into the fishing sector. This programme was implemented in 1986. All fishermen working on licensed and unlicensed fishing boats are registered and will be issued registration cards which act as

administrative identification documents. The cards are non-transferable and under normal circumstances no new cards will be issued after 1986. The registration also acts as a census of the actual number of fishermen in the fishing industry, since the information collected includes age; fishing boats/gears operated; number of years fishing; position/responsibility in the fishing units; and base of operation.

- (b) *A buy-back scheme* to compensate boat owners who come under the resettlement programme, by giving them the computed second-hand value of the boat (plus engines) to use as capital for a new business, or the initial finance for settling down in a new job. Such fishing boats will not under normal circumstances be allowed to find their way back into the fishing industry, but will be destroyed as condemned boats or if found suitable, used as artificial reefs. The boat owners involved will not be issued with licences to own fishing boats/gears in the future. The scheme thus provides the incentive for surplus fishermen to leave the sector. There is however, no element of compulsion involved in the buy-back scheme, since fishermen have the choice to accept or reject the offer.
- (c) *Setting up a Committee on Resettlement of Surplus Fishermen (the Committee)*. This Committee was set up on the directive of the National Action Council in 1972, to provide a special task force to look into resettling the surplus fishermen in land schemes. The Chairman was the Secretary-General of the Ministry of Agriculture and the members were representative of the various government agencies including the Department of Fisheries (DOF), Fisheries Development Authority Malaysia (LKIM), Veterinary Department, Agriculture Department, Treasury, Economic Planning Unit, Ministry of Land and Regional Development, Federal Land Development Authority (FELDA) and State Governments. For the record, the committee through the efforts of certain agencies, was successful in siphoning off some 1,000 fishermen (from 1972-1974), in FELDA land schemes. Another 426 fishermen were resettled in a padi cultivation programme in the state of Trengganu, in 1981; and some 115 fishermen were resettled in tobacco cultivation schemes at Kandis and Air Tawar, in the state of Kelantan. However the resettlement scheme was not as successful as anticipated and it was decided to adopt a more integrated and concerted approach. The task of the Committee was therefore reviewed in order to take in other aspects of employment, such as aquaculture, offshore fishing, construction and service sectors, small-scale business, the fish processing industry etc. The Committee was therefore reconstituted in 1984. Its terms of reference are as follows:
- (i) to identify alternative employment in other economic sectors for the surplus fishermen;
  - ii) to secure places in land schemes for the surplus fishermen;
  - iii) to identify the training requirements of the surplus fishermen in alternative vocations and to assist them in securing places at the existing training centres.
  - iv) to coordinate the resettlement programmes and schemes organized by other agencies and the state governments.
- (d) *Provision of credit schemes* with easy terms to assist fishermen who wish to change their employment to other sectors of the economy. Four main programmes were drawn up, viz:
- i) Fisheries Sector - this involves 2 sub-sectors i.e. offshore fisheries and aquaculture. With the declaration of an Exclusive Economic Zone (EEZ) by Malaysia, the waters under her jurisdiction were expanded from 48,000 sq. nautical miles to 160,000. This gives her the exclusive right to regulate, manage and exploit the fisheries resources within her EEZ. Opportunities to expand the fishing operation into these waters will be given to fishermen displaced from the inshore areas. Initially some 246 new fishing units of more than 70 GRT will be commissioned from Peninsular Malaysia. This will employ some 2,460, thus providing opportunities to some of the surplus fishermen. With respect to aquaculture development, the government has encouraged greater growth of aquaculture

based on commercially viable projects and involves freshwater, inland and brackish-water aquaculture. The use of old mining ponds is one possibility for resettling surplus fishermen to operate some of the 6,000 ha of suitable land. In cases where the aquaculture areas are sited close to the fishing villages, the fishermen can be involved as full time operators or partners, thus providing an alternative source of employment for surplus fishermen from the inshore areas. Some 2,050 surplus fishermen are expected to be involved.

- ii) Fisheries -related industries - this involves such activities as fish processing, provision of fishing inputs, boat maintenance, and net repair and net making. In the next 5 years, some 750 surplus fishermen are expected to benefit. The fishermen will be given the necessary training by the established government agencies or on-the-job training at private establishments.
- iii) Agricultural sector - the employment of surplus fishermen in land-based agricultural activities will alleviate to a certain extent the labour shortage problem faced by this sector. Employment opportunities are found in land schemes newly opened up by the government, special land schemes for fishermen and agriculture - related activities of processing, service and business ventures. The relocation of surplus fishermen on new special land schemes has proved to be the most successful amongst the land-based agricultural activities; however, its implementation has met with some limitations. A total of 5,050 surplus fishermen will be given the opportunity to get involved in the land-based agricultural sector over the next 5 years, out of which some 4,500 fishermen are for the new/special land schemes.
- iv) Construction and Service Sectors - the pre-requisite to successful relocation of the surplus fishermen to new sectors is training in the necessary skills and knowledge. Some 2,500 surplus fishermen are expected to get employment in these two sectors in the next 5 years.
- v) Provision of training - to equip the surplus fishermen with the skills and knowledge of all aspects, i.e. fisheries-related industries land-based agricultural activities, and construction and service activities. Most of the fishermen are found to be lacking in skills and knowledge of activities apart from fishing. Training in management of small-scale businesses is also relevant, and the authorities offering such training are the Agricultural Bank of Malaysia and the Council of Trust for the Indigenous People (MARA). The liaison agency is LKIM, which coordinates with relevant authorities and assists in selecting the suitable candidates.

#### 4. Implications and Limitations

- 4.1. Some MS\$64.94\* millions will be provided by the government to implement the various schemes outlined in paragraph (3). Of this, M\$ 48.94 millions will be in the form of development allocations and M\$ 16 millions in the form of credits. The total beneficiaries over the next 5 years will be 12,810 surplus fishermen. The initial allocation was larger than this but, due to the economic recession, the programmes suffered financial cut-backs.
- 4.2. There are several limitations to the implementation of the schemes promoted by the government, viz:
  - 4.2.1. The schemes are all implemented on a voluntary basis. It is therefore up to the discretion of the fishermen whether they participate in the schemes. In addition, the factors of social and job immobility come into play to pose hindrances to the success of the resettlement programmes. Some of the reasons cited as obstacles to labour mobility are:—
    - a) the reluctance of fishermen to change from their accustomed occupation;
    - b) apprehension towards geographical relocation;
    - c) uncertainty of abandoning previously acquired skills;

\* Note : US\$ 1 = M\$ 2.60

- d) apprehension of disrupting family;
- e) lack of knowledge / skills in non-fishing activities;
- f) lack of knowledge / information of job opportunities in other sector;
- g) lack of pioneering spirit.

Several steps could be taken in order to make alternative labour markets, more attractive such as : providing the fishermen with better job information; setting up employment service centres; providing training in other vocations; adequate vocational guidance; giving adequate education; and provision of housing and other basic amenities at the new location.

4.2.2. The number of surplus fishermen that can be absorbed by the new land development schemes of FELDA and others are limited by several factors, viz:

- (a) the long waiting list of non-fishermen applicants;
- (b) no special treatment (quota) is given to fishermen (unlike that accorded, for example, to ex-servicemen);
- (c) limited new land is being opened up, and
- (d) participants are subject to the conditions of residential status as set by the relevant state authorities.

The relevant land development authorities are members of the Committee and have given a commitment that at least 600 fishermen will be absorbed annually by the various land schemes. The state governments, on the other hand, need to be more prepared to open up special land schemes for surplus fishermen like those in the states of Kelantan and Terengganu. The state of Malacca has drawn up a definite programme to open up 403.47 ha of suitable agricultural land for some 235 surplus fishermen. The main crop suggested is cocoa with orchards as supplementary cultivation. Greater mobility of the fishermen could be encouraged by waiving the residential status of the applicants, especially in cases where the quota of their own state residents cannot be fulfilled.

4.2.3. The activities related to aquaculture are relatively new to Malaysia in general, and to the fishermen in particular. It also entails large capital costs and requires different kinds of technical and management skills, which might not be readily acquired by the fishermen. Suitable land is also difficult to come by, or, even when it is available, it might not be easily available to the fishermen because of competition by large-scale operators who can offer higher premiums or have other uses for the land. In this respect the state governments should have definite policies and plans to set aside certain of the suitable areas for the surplus fishermen.

4.2.4. Jobs in the construction sector are normally considered to be non-stable or temporary although the wages offered are higher than in the fishing sector (M\$ 10-15 compared with M\$ 8-10 per day). This factor alone would not be sufficient to entice the fishermen to take up jobs in the construction sector. They are on the whole not prepared to face the possibility of looking for jobs after one contract is over and having to return home when they fail to secure another. A longer job contract which ensures some form of job security and stability might be the solution to this problem. However, this would require some changes to the labour laws of the country.

4.2.5. The working conditions on estate sectors are different from those familiar to the fishermen' who are used to having relatively "easy" working conditions. Such working conditions might be more suitable to certain sectors of the labour force (like the immigrants). The estate sector is unlikely to provide as immediate answer to the problem of surplus fishermen in Malaysia.

- 4.2.6. Competition for employment from the school leavers might be considered as another obstacle. These new entrants to the labour market are regarded as quite versatile and adaptable to new working conditions, wage level, and social vagaries. The present economic situation further exacerbates the problem of competition for the limited vacancies.
- 4.2.7. The financial allocation set aside for the buy-back scheme is too small to have far-reaching effects. In the initial stage of the Fifth Malaysia Plan (1986-1990), a sum of M\$19 millions was allocated for the scheme to benefit some 3,188 fishermen. It has now been reduced to M\$2 millions. There is therefore a need to implement the scheme carefully so that the limited funds can be distributed evenly in line with the New Economic Policy. Priority might be given to those traditional fishermen whose earnings are very much below the poverty line; this way the cost of compensation is relatively small (due to the nature of their capital assets) and more fishermen would then be able to enjoy the benefits of the scheme.
- 4.2.8. The retraining and knowledge imparted to the fishermen need to be coordinated with employment opportunities in other sectors. The relevant agencies need to ensure that those who are sent for training do not find their way back into the inshore fishing sector, otherwise the whole exercise would be defeated. It is therefore advisable to provide training to those who have already been identified and succeeded in getting the necessary approvals and sponsorship for the new jobs/employment.

## 5. Identification of Surplus Fishermen

- 5.1. In 1984, it was identified by the government that 16,051 units of boats involving some 27,000 fishermen were to be phased out from the fishing industry under a long term plan. This figure is based on two main groups of fishing boats (and thus fishermen) i.e. (a) using outboard engine or non-powered, and (b) trawlers and purse-seiners (of less than 40 GRT). The details of the types of boats being phased out are as follow: 103 units of fish purse-seiners, 4,339 units of trawlers, 67 units of anchovy purse-seiners, and 11,542 units of traditional boats (hooks and lines, drift netters etc). The calculation is based on the amount of resources available in the inshore areas of Peninsular Malaysia. As a result of this restructuring (in favour of efficient producers) the inshore fishing sub-sector is found to be able to sustain only 9,622 fishing units utilizing some 50,000 fully employed fishermen.
- 5.2. The computation of the surplus fishermen on the basis of resource potential provides a good indicator of the type of fisheries, area of operation and the amount of manpower required to operate the units. It is thus seen that prime emphasis would be given to the phasing out of the category of fishing operators who are using uneconomical fishing units such as the non-powered and outboard-powered, and earning incomes of lower than the poverty level.
- 5.3. Nevertheless, the implementation stage has, among other things, to take into consideration the response and attitudes of the fishermen to the resettlement programmes of surplus fishermen or to changing their occupations. Some 4,825 fishermen-respondents were interviewed in 1983 to determine their attitudes towards changing jobs, the reasons for having such attitudes and the nature of jobs preferred. Certain important findings were:
- (a) Some 26.2% of the respondents wanted a change of occupation out of which 14.4% were crew and 11.8% were owner-operators.
  - (b) The single most prominent group interested in changing jobs were owners-operators and crew of drift net boats (26%).
  - (c) Different reasons were given by the owner-operators and crew. Owner-operators were mainly concerned about the uncertain economic future for the family members, whereas the crew cited low income for wanting to change employment. Other reasons were the depleting fish

resources and lack of fishing capital.

- (d) Among those who had had some form of working experience in non-fishing sectors, some 32% had been involved in agriculture - related activities; with a much smaller percentage in fisheries - related activities (like fish processing and aquaculture).
  - (e) Regarding their preferences for new employment on a full-time basis, the main one was land resettlement schemes, followed by fisheries - related activities (like fish processing, and making fish boxes). Among those preferring to get employment in agriculture-related activities (other than as settlers) i.e as wage or contract labourers, the percentage was bigger among the crew (23%) than among the owner-operators (18%).
  - (f) The main four reasons, given by the owner-operators for not willing to participate in land development schemes were used to being fishermen; not prepared to leave the fishing villages; no experience in agriculture; family commitments; no knowledge or information of such opportunities. The crew's reasons were in a different order; used to being a fisherman; no knowledge or information of such opportunities; not prepared to leave the fishing villages; no experience in agriculture; and family commitments.
- 5.4. The emphasis being given by the implementing agencies are on the following areas:
- (a) registration of fishermen as a means of controlling entry into the fishing sector;
  - (b) buy-back scheme;
  - (c) land resettlement schemes by way of public relations and distributing application forms to the fishermen to participate as settlers;
  - (d) training in various vocations and fields;
  - (e) provision of credit.

## 6. Specific Case Studies

The following paragraphs relate the progress of two of the most prominent and special land schemes for fishermen in the state of Kelantan, i.e. Kandis Fishermen Resettlement Development Project (the Kandis project) and Airtawar Tobacco Planters - Qurers Project (the Air Tawar Project). The purposes of the studies were to determine:

- (1) the background and characteristics of the settlement projects;
- (2) the income level obtained by participants in the projects;
- (3) the alternative source of income of the participants, if any;
- (4) the background of the fishermen - settlers.

### 6.1. The Kandis Project

6.1.1. The Kandis Project was started in 1980 to enable a total of 100 fishermen from the neighbouring district of Bachok to be resettle as tobacco growers. The total area of the Project is 303 ha. Each participant was allocated a total of 1.7 ha., i.e. 1.6 ha. for tobacco growing and 0.1 ha. for housing facilities; each of them was also provided with a water pump house and a sprinkler. The intake of the participants was staggered over a period of 4 years. The objectives of the Project are:

- (a) to resettle some 100 fishermen - families who had an income below poverty level;
- (b) to increase the income level of participants above the poverty level;
- (c) to provide land and decent living conditions to the ex-fishermen;
- (d) to make it into a pilot project for implementation in other areas.

The project is run by the Area Farmers Association (AFA) of which all the participants are members. There are clear-cut divisions of labour: the participants undertake the responsibility for growing the tobacco (from ploughing the land to harvesting the green leaves); the green

leaves are sold to the AFA which takes over the rest of the chain (curing, processing, grading, and marketing). The main buyers of the crops are the Malayan Tobacco Company and the Leaf Tobacco Development Corporation. The National Tobacco Board sets production quotas.

- 6.1.2. The settlers and family members have the opportunity of obtaining other sources of income from the Project by being employed at the curing station, or in cultivation of vegetables, either on a full-time or part-time basis. At the station they are employed as clerical staff, tractor drivers, checkers, kiln attendants, leaf sorters etc. There are therefore 3 main sources of income: from tobacco growing, from employment at the curing station, and from agricultural activities other than those involving the tobacco crop. The number of participants undertaking vegetable cultivation increased from 2 during the 1982/1983 season to 10 during the 1985/86 season. Attempts were made in the 1982/83 season by 13 settlers to culture freshwater fish. It failed primarily due to lack of proper management and care.
- 6.1.3. The income of the participants from tobacco cultivation varies, from M\$ 3,013 to M\$ 27,544 per person per season depending on the gross sales value of green leaves. For a settler to be above the official poverty line he needed to obtain a gross sales value of M\$ 7,350 per season in 1985/86. This was in fact achieved by 53% of the participants. There are several reasons for the differences in sales value and thus income by participants i.e.:
- (a) the relative elevation of the farm site
  - (b) a number of the labourers are not of the minimum requirement;
  - (c) little attention is paid to good farm practices; and
  - (d) crops are subject to the vagaries of nature.

In the mean time, the average gross sales value obtained by the settlers is improving from season to season i.e. M\$ 3,988 in 1981/82, M\$ 6,184 in 1982/83, and M\$ 9,009 in 1985/86.

- 6.1.4. As for the backgrounds of the settlers, 60% of those interviewed (20 persons) had been ordinary crew members while the remainder were owner-operators. Almost all the ex-fishermen had the experience of cultivating tobacco on others' lands near their fishing villages. Their experience of being fishermen covered a period of 10-17 years. Most of them, however, did not own any land prior to joining the Project; some had been staying with their parents or in-laws. Due to the proximity of the Project to the coastal areas, some 60% of the respondents still go out fishing during the tobacco off-season. Most of them, nevertheless, do not wish their children to follow in their foot-steps but would prefer them to be employed in government establishments.

## 6.2. The Air Tawar Project

- 6.2.1. The Air Tawar Project was started in 1983 to enable a total of 82 farmers and fishermen to participate in tobacco growing. The total area of the Project is 259 ha. with each participant being allocated 1.6 ha. for growing and 0.1 ha. for housing facilities. The project was under the management of the National Tobacco Board, employing the settlers as growers, curers and marketers. The crop is sold to the Malayan Tobacco Company and the Leaf Tobacco Development Corporation. The infrastructure in the forms of housing, barns, sprinklers and one engine pump are constructed by the Project. Repayment for the infrastructure facilities costing M\$ 50,000 is over a period of 6 years.
- 6.2.2. The responsibilities of the settlers do not stop at planting and selling the green leaves. They are provided with the necessary facilities for curing, grading, sorting and marketing the dried leaves. The dried leaves are sold to the Malayan Tobacco Company and the Leaf Tobacco Development Corporation which also provide the transport.

- 6.2.3. The average gross sales value in the 1985/86 season was M\$ 11,256 per participant. Taking into consideration the farm-input costs and the repayment for the infrastructure costs during the first 6 years, the total gross sales value of each participants needed to be at least M\$ 16,162 in order to be above the poverty line income level. There were some 30% of the participants who achieved that level in the 1985/86 season. Without the repayments the gross sales proceeds need be only M\$ 7,829, and there were some 62.5% participants who obtained that level in the 1985/86 season.
- 6.2.4. 62.5% of the fishermen participants had been ordinary crew for 10-15 years before joining the Air Tawar Project. Nearly all of them had previous experience in tobacco cultivation but they had no land of their own prior to joining the Project.

## 7. Conclusion

- 7.1. The problem of excess labour force (fishermen) in the fishing industry has been given due attention by the government of Malaysia. Various steps have been taken by the government to address the issue of underemployed fishermen. The overriding objectives are: to ease the problem of abundance of labour relative to the resource potential; to reduce the congestion of fishing effort in the inshore areas; to manage, rehabilitate and consolidate the resources in the inshore areas; and to maximize income from fishing for those who remain in the labour force. Concerted efforts from all the agencies involved in the resettlement programmes have contributed to the success of their implementation; while "push and pull" factors are the essence of the programmes.
- 7.2. Nevertheless, there are internal and external factors that need to be taken into consideration for the realisation of the objectives, such as: the financial constraints; the job opportunities available in the face of the economic situation and competition; and job mobility of the fishermen.
- 7.3. The success stories of some of the resettlement projects already implemented are due to certain factors: the cooperation of the state government which provides land and other facilities; the experience already obtained by the settlers in similar activities; the close proximity (within a radius of 5-10 km) of the village of origins of the participants to the projects; well organized management set-up; and initial financial and moral support from the government. In all cases: the *chance* is given to the fishermen to move away from their village and thus their traditional occupation, to a new area and a new job, which also mark the beginning of a better life for their children.
- 7.4. While criteria for identifying surplus fishermen drawn up by the government are as useful for administrative and management purposes, the actual fishermen who would finally be included in the related programmes will depend largely on the available opportunities and the response from the fishing community. Since there is no element of compulsion introduced, the government has to give preference to those who show their interest and make the necessary effort to secure alternative employment. The manpower planning of the fishing sector at the same time needs to pay close attention to the labour supply and demand in the other sectors.