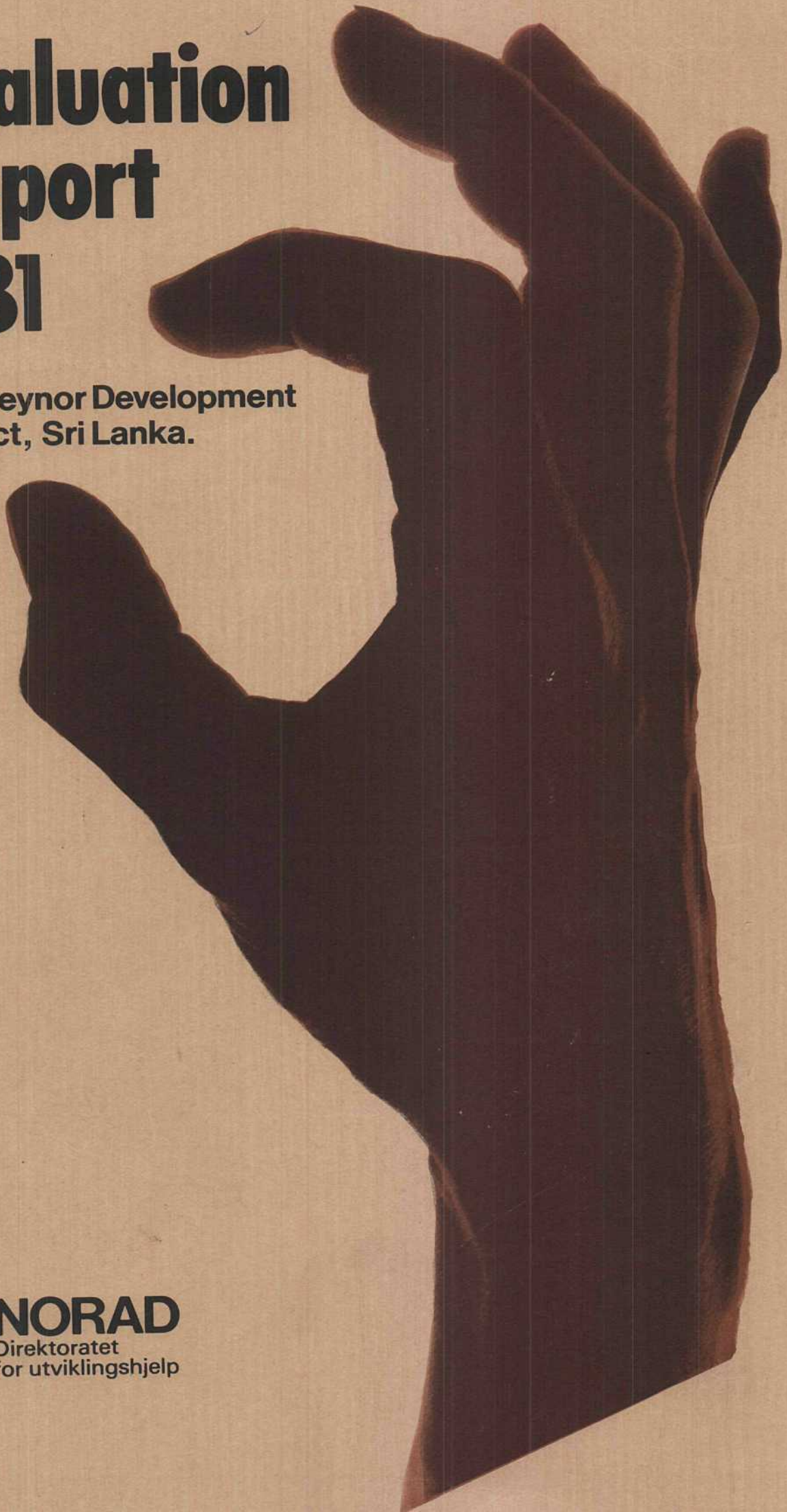
Evaluation Report 1.81

The Ceynor Development Project, Sri Lanka.



NORAD
Direktoratet
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RESTRICTED

R E P O R T

OF

THE MISSION TO EVALUATE THE ACTIVITIES IN SRI LANKA

OF

CEYNOR DEVELOPMENT FOUNDATION LTD
(SRI LANKA)

AND

NORGES GODTEMPLAR UNGDOMSFORBUND
(NORWAY)

APPOINTED BY

NORAD

NORWEGIAN AGENCY FOR INTERNATIONAL DEVELOPMENT

Oslo,
December, 1980.

THE MISSION

The Norwegian members of the Mission arrived in Sri Lanka on 11 November, 1980. The Mission's activities in Sri Lanka commenced on 12 November, 1980 and ended on 14 December 1980. The Mission consisted of:

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1. SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS

The Mission's mandate was to review the activities and achievements of the CEY-NOR Development Foundation (CNDF) and to make an assessment of these in relation to its objectives, and the social and economic factors including government policies influencing programme implementation. The purpose was to draw conclusions to provide a basis for undertaking a consolidation programme and to formulate recommendations for future development.

The original aim of the programme was the economic development and social upliftment of economically depressed or socially oppressed groups among coastal communities with a view to their becoming economically independent, socially accepted and self reliant. This was to be brought about through the provision of employment, improvement of nutritional standards, and improved conditions of health, hygiene, housing, education and culture. Employment generating activities undertaken in pursuance of these aims included boat building, fishing, processing, manufacture of fishing gear and ice. Social development activities included the provision of improved housing and water supply, primary and adult education, mother and child care, and the development of handicrafts.

The industrial activities of CNDF have created a substantial amount of employment, which have led to other employment related benefits, in an area which was in acute economic distress as a result of the closure of the port of Kankesanturai. The factories at Karainagar and Gurunagar have employed nearly 700 persons in the target villages. The boat production activity has provided employment for approximately 4500 fishermen and 800 families engaged in post-harvest fisheries. The production of boats, nets and ice represent both a quantitative and qualitative step

forward towards the modernisation of fisheries in the Jaffna district and elsewhere.

In the social sphere reasonably successful inroads have been made into traditional barriers based on caste and sex. The level of health, hygiene, housing and basic education has been raised in the target areas through the activities of the community development programme.

The matter of social distribution of these benefits however leaves much to be desired. The goods and services produced - with the exception of small mesh cast nets - are beyond the reach of the really poor fishermen. Direct impact on the improvement of nutritional standards - through improved distribution of fish - has been minimal as CNDF has failed to break through the powerful distribution system. The target groups have not been able to generate sufficient self-reliance and participation or to develop group capability for improved access to social benefits. These are the major shortcomings of the programme.

Over the years, CNDF had been gradually veering away from the spirit of its original purpose, towards a more commercial and technological orientation. Since 1977 a parallel process has developed whereby government has increasingly taken control over the activities and decision making processes of CNDF. A combination of these and other factors led to the expansion of CNDF to include, besides the original projects in Karainagar, similar developments in the Matara and Puttalam districts, and the boatyard in Colombo originally operated by the Ceylon Fisheries Corporation. While the decision to expand its activities to more locations in Sri Lanka is beyond dispute and had been under consideration for some time, in practice the expansion was undertaken in haste, without adequate examination of economic feasibility and without adequate reserves of working capital to sustain the development activities. This has led to CNDF falling into the classical "overtrading" situation characterised by severe shortage of working capital to maintain day to day operations. Other

factors contributed to aggravation of the financial difficulties, notably government's import liberalisation policies, the pricing mechanism particularly for boats, and the steeply escalating prices of imported raw material. At the present moment these financial difficulties are indicated by bank loans totaling Rs.46.0 million carrying interest payments exceeding Rs.600.000 per month, working capital requirements of Rs.37.4 million, and other liabilities amounting to Rs.6.5 million. CNDF is on the brink of insolvency.

One of the reasons for the present difficulties was that the development of the organisation and management of CNDF failed to match the requirements of the vastly expanded role it is now called upon to undertake. This is one of the factors which has led to the situation in which CNDF finds itself, viz., the incongruous position of being a private foundation but under the de facto management of the Ministry of Fisheries.

The seriousness of the financial situation of CNDF calls for immediate measures to build up the capital structure of this enterprise by the provision of adequate equity capital, and by finding working capital to liquidate current debts and build up adequate reserves. In order to induce donors to participate in the above measures there has to be a basic change in the management of CNDF which will enable donors to be in a position to influence decision, particularly those involving expansion of activities, bank borrowings etc. This can be achieved if CNDF could transform itself into a truly autonomous NGO with effective decision making authority.

With the financial and management situations being as they are now, the Mission has examined a wide range of possibilities

revolving around two basic positions:-

- that CNDF reverts effectively to the status of a truly non-governmental organisation, faithful to its original purpose, and continuing to receive donor support; or

- that CNDF is handed over to government and donor capital transferred to it.

The first pre-requisite to any solution based upon the first alternative is a systematic examination of the economic viability of the activities of CNDF considering the magnitude of its present debt commitments. The Mission has recommended that such an examination should be undertaken immediately as a second stage of the evaluation to be undertaken by suitable Sri Lankan consultants.

The second requirement is that CNDF should be in a position to function as a truly autonomous non-government organisation but with mechanisms to ensure close liaison with the Ministry of Fisheries. The Mission has made detailed recommendations regarding this aspect.

Examination of the viability of CNDF activities would naturally take into account the findings of the Mission regarding the various activities listed below:

Boatbuilding: CNDF's current problems are the increasing competition from rival boatyards, government price control and the inability thus far to produce a small boat at a price within reach of the small fishermen. Future development would focus on the production of a small boat, and the use and popularisation of ferro-cement for boats over 30 ft.

Fishing gear production: Profitable production in the early years in Gurunagar was in some measure due to government protectionist policies. With import liberalisation and obsolescent machinery, it is unlikely the factory will be economically viable for long. A solution could be found in the consolidation of all three net factories and some measure of protection against imports.

Fishing: While the fishing operation in Karainagar has generally failed to generate profits, nevertheless it has contributed to a progressive accumulation of experience within CNDF in fishing, net making, boat building, processing and marketing. It has provided employment and income for about 60 families. Future development should be decided on the basis of test fishing for the purpose of ascertaining suitability of new techniques and equipment.

Fish processing: This is the least viable of the activities. Future development should focus on the processing of the silverbelly which is harvested in large quantities by trawlers. CNDF should not attempt independent research but should collaborate with the Institute of Fish Technology where research is already in an advanced stage.

Community development: There is little doubt that the social objectives of the originators of the project have been achieved to some extent in the target villages of Karainagar. The main short-coming has been the failure to move decisively towards the development of self reliance. It would appear to be desirable that in future community development is administered independently of the other activities of CNDF.

The reports consists of five chapters in addition to this summary. The second chapter reviews the history of CNDF and earlier evaluations, followed by an examination of the objectives and ideology in chapter three. Chapter four consists of assessment of the principal activities of CNDF leading to an assessment in chapter five of their overall development impact. The final chapter sets out the conclusions and recommendations of the whole report.

2. INTRODUCTION

2.1 Brief History of the CEY-NOR Development Foundation (CNDF). 1967 - 1980.

The origin of what is today the Cey-Nor Development Foundation Ltd (CNDF) dates back to 1967 when a group of Sri Lankan youth living in Norway got in touch with a Norwegian youth organization Norges Godtemplar Ungdomsforbund (NGU) in order to start a fisheries development project in Karainagar in the Jaffna district of Sri Lanka. With the monies raised by NGU through a fund raising campaign and supplemented by NORAD, the Sri Lankan youth purchased land in Karainagar and commenced boat building activities. At first the undertaking was managed as a private company, Malu-Meen Enterprises, but following objections raised by NGU who expected the enterprise to be run on a cooperative basis, its management was handed over to the Sri Lanka Freedom from Hunger Campaign Committee (FFHC) on a trusteeship basis. The CNDF came into existence in 1971 as an independent non-profit foundation.

The objectives of the founders, on the basis of which the fund raising campaign was conducted, was the economic development and social upliftment of certain economically depressed and socially oppressed groups, through the development of small-scale fisheries and the execution of community development programmes for the improvement of living conditions and nutritional standards. The first activities were geared towards the production of more modern fishing craft and their use for training young men for a career as fishermen.

It was soon realised however that the aims of the founders could not be achieved through such a simplistic strategy, as the fishermen whom the project intended to benefit were in no position to buy the boats. So around 1969-70 it was decided to extend the scope of the project to include other income generating activities to provide employment for the target groups. Thus, progressively, besides boat building the project began to undertake the processing of shrimps for the export market, the production and sale of ice and trawler fishing. In order to reduce the dependence on import of fibreglass mats and resin, CNDF took the initiative after the first oil price hikes in 1974, to introduce ferrocement boats.

In 1975 a fish net factory was established in Gurunagar to meet the needs particularly of the poorer fishermen of Jaffna for their throw nets and stake traps, and was soon to become one of the more successful among CNDF activities.

The next two years were a period of consolidation when CNDF may be said to have reached a certain maturity. In 1976 and 1977 both the boat yard and the net factory were operating profitably and in 1977 attained peak net profit figures of Rs. 2.44 million (boat yard) and Rs. 1.20 million (net factory). A reasonably satisfactory level of skill had been achieved in boat building and fish net manufacture, employment opportunities had been provided for a large work force, and considerable community development activities had been accomplished. An indication of the sense of satisfaction felt by the directors at that time was the initiation of plans for the development of a fish net factory in the Matara district and the consideration of activities in the Eastern province. Paradoxically, however, while this sense of optimism prevailed in CNDF, the Norwegian patron, NGU, was becoming increasingly apprehensive that CNDF was outgrowing its capacity to finance. An NGU inspired policy of developing close links with the government began to be adopted in the hope that the government would take over the financial support of the programme when eventually NGU was no longer in a position to continue its support.

The change in Government took place at this crucial juncture, and set in motion the chain of events that were to have far-reaching effects on CNDF. The change in the economic environment resulting from the import liberalisation measures of the new government and the devaluation of the rupee began to have their effect in the course of 1978. The lifting of restrictions on the import of boats and fishing gear coupled with the predilection of the local fishermen towards imported goods let to a slowing down of turnover. The devaluation of the rupee immediately increased the local currency value of the imports, on which

the boat yard and net factories were wholly dependent and the prices of which were already escalating in the overseas market with each successive oil price hike. The problems of the changed economic environment were compounded by the changed political environment.

It is relevant to note here that the development and growth of CNDF was preceived by certain sections of the Tamil Community in the Jaffna penninsula as an example of how, with foreign assistance, economically viable enterprises could be established; and this example was exploited by the separatist movement in pursuing its political objectives. This resulted in a corresponding reaction in the south against the continued existence of Cey-Nor as a purely Jaffna based enterprise, although this reaction remained as a political undercurrent and did not surface in the activities of CNDF.

As was pointed out earlier the change of government took place at a time when the NGU Aid Committee was actively pursuing a policy of seeking a closer relationship with the Government. In those circumstances the goodwill of the incoming government was very much in doubt. The Aid Committee thus felt the need to establish an immediate accomodation with the new government. Members of the new Government perceived this as an opportunity to obtain assistance for the establishment of industrial ventures in areas of interest to themselves. The outcome was that an agreement was hastily negotiated in August 1977 whereby the Aid Committee agreed to finance a development programme much more ambitious than that contemplated by the Board earlier. The Aid Committee was to finance the external components of these new projects in the Matara, Puttalam and Batticaloa districts respectively, and the government negotiators agreed to meet the local costs of the development <u>including working capital.</u> The conclusions were set out in the form of a gentlemen's agreement signed by the Minister of Finance, Deputy Minister of Finance, Minister of Fisheries and the

Chairman of NGU Aid Committee, and did not have the prior approval of the CNDF board of directors. Nevertheless it was a strong expression of goodwill on the part of the Government. Despite initial misgivings about both the scale of the expansion and CNDF's capacity to undertake it, NORAD and NGU reluctantly accepted the commitment fo fund the projects in order to demonstrate their support for the wider geographical spread of the CNDF activities. All the machinery and equipment promised were delivered. The boat yard, fish net and ice factory projects in Matara were implemented as also the boat yard and ice factory in Puttalam. The Government provided assistance in the form of land and buildings for the Matara and Puttalam projects and obtained SIDA, UNF and FFHC aid for the Matara project. The Government has also provided Rs. 3 million for the construction of the fish net factory in Wenappuwa. However, no assistance was provided by Government towards working capital as agreed - indeed there has never been budgetary provision to make this possible - and during the financial year 1978 - 79 CNDF spent Rs. 4.4 million in local costs as a result on these projects.

The expansion programme thus undertaken, along with the economic problems earlier discussed, led CNDF into increasing financial difficulties. These difficulties were perceived by the Ministry of Fisheries to be the outcome of financial mismanagement on the part of CNDF, and gradually the Ministry began to assume de facto control of the management of CNDF. At that stage the Ministry decided to transfer the Mattakuliya boat yard from the Ceylon Fisheries Corporation to CNDF, leaving the question of working capital for the running of the boat yard unresolved.

In its management of CNDF the Ministry of Fisheries has tended to focus strongly on efficiency and centralised control. This is manifested in the retrenchment of surplus workmen, the transfer of accounting and administrative activities from Karainagar to Colombo and the replacement of some of the staff, the transfer

of trawlers from Karainagar to Colombo, the establishment of a central security service and the decision to pay productivity bonuses to boat yard workers. The problem unfortunately extends beyond managerial efficiency, greater productivity and the elimination of waste. The costs of expansion, the additional commitments on raw material imports as a result of the take over of the Mattakuliya boat yard and the fish net factory in Matara, government's effective control over the prices of CNDF products through the operation of the subsidy scheme, the high rate of inflation and unrestricted imports, have all combined to drive CNDF to the brink of bankruptcy. Figures made available to the Mission of the present position indicate that CNDF has had to have recourse to bank loans to finance its operations. Total bank loans as on 24 November 1980 stood at Rs. 46.0 million and interest payments at a staggering Rs. 660.000 per month. In addition there were other liabilities of considerable magnitude such as the cost of completion of the new projects, rehabilitation of existing activities, sundry creditors etc. This was the situation that confronted the Mission when it began its evaluation.

2.2 Review of Earlier External Evaluations

The external evaluations that have been carried out in relation to the CEY-NOR Programme, have all been relatively limited in scope. Three of them, undertaken at an early stage, are mainly of an anthropological and sociological character,whereas a fourth report deals mostly with economical and technical aspects. The present evaluation exercise, thus, is the first one which in intended to look into the various technical, financial, managerial and socio-economic aspects of the Programme in an integrated manner.

Here, we shall only review some of the main conclusions contained in the four reports. More specific references may be found in other parts of this Report.

In 1971, a group of Swedish sociologists from the University of Gothenburg made an extensive analysis of the Programme, titled "Kampen om utvecklingen" ("The struggle between conflicting directions of development" - the report is written in Swedish) (Bibin et.al.,1971). The report is highly critical, and comes to the conclusion that the Programme has not made any noticeable contribution to the standard of living among the target groups. It is claimed that those who were employed (at that time, around 100 persons) had been recruited from the relatively well-off, and that the externally-based assistance could have been a factor inhibiting local initiatives. The price of the boats produced were found to be out of reach of the really poor fishermen. The structure of decision-making was found to be highly hierarchical, corresponding almost exactly to the social stratification in Sri Lankan society at large (ideals of equality had been heavily emphazised in the Programme). Furthermore, Bibib et.al. claimed that CNDF had changed from the development project it originally was into a capitalist enterprise, and thereby adapted step by step to the power structure of the country's market-economic-political system.

The well-known Norwegian social anthropologist, Professor Arne Martin Klaussen, presented a report to the Norwegian Board of CEY-NOR in January 1973, on the basis of a 4-week study (Klaussen, 1973). The Report gives an overview of the demographical, social and ethnical structure in the Programme area, with particular emphasis on the caste structure. As for the impact of the Programme, Klaussen points out the following positive aspects:

(i) creation of employment
(ii) contribution to the modernisation of the fisheries in Sri Lanka;
(iii) through the ice plant, ice is now available in the Jaffna District for the first time;
(iv) the fish processing activity may under certain conditions produce valuable foreign currency income;
(v) the general standard of health, hygiene, housing etc. has been improved in the target area;
(vi) the Programme may have contributed to the creation of consciousness about problems and possibilities among members of the target population.

On the negative side, Mr. Klaussen points out the strong technocratical bias to be found among the Board members, which he is afraid is taking attention away from the developmental aspects. He also goes through various problems related to communication between management and trade unions, export of shrimps, import of raw materials, acquisition of fish from the fishermen and the question of marketing in general.

Else Skjønsberg, a Norwegian sociologist, has undertaken a study on sex and caste in the original project area (Skjønsberg, 1975). On the basis of this field research, she also prepared a report on the development impact of Cey-Nor (Skjønsberg, 1974). Her criticism seems to fall very much along the same lines as the earlier cited reports:

"It seems, however, that the lack of clearly stated and concrete objectives is perhaps the main reason why (Cey-Nor) has not created the impact one might have hoped from a development project. The project seems dominated by ad hoc planning and implementation arisen from acutely felt needs that invariably concern technical and economic aspects of the project. This has moved the project in the direction of becoming a business enterprise where development considerations often are looked upon as a hindrance for smooth economic running. It seems that profit-making, which in a development project ought to be a means for development, has become an aim in itself." (p.38).

Skjønsberg's main proposal was that a five-year plan with concrete aims be worked out. To our knowledge, this recommendation has not been followed.

The fourth report is the so-called Skjerdal Report, 1978. It deals mainly with economic and technical aspects, and is generally very optimistic regarding the future of CEY-NOR. On the question of social impact, its conslusions are that target groups that had not been favoured in the first phase (viz. the Palla caste) had gradually been involved. Quite contrary to Klaussen's and Skjønsberg's observation that the social differences had increased between those who had been favoured (Thimilas) and those who had been left out (Pallas), the Skjerdal Report claims that caste antagonisms on the whole have become less dominant in the local community since the Programme began to operate.

2.3 Purpose and Terms of reference of the Evaluation

In accordance with the present agreement between NORAD, NGU and CNDF, the NORAD assistance to the Programme expires by the end of June 1981. This agreement which was made in 1978 was intended to consolidate CNFD and make its activities selfsustaining in the course of a three year period. An earlier plan of consolidation had aimed at achieving this by 1978.

An inspection mission from NORAD's office for private organizations October-November 1979 expressed serious doubts as to the success of the consolidation scheme. Particuarly, concern was expressed about the scale of the sectoral and geographical expansion and CNDF's financial and administrative capacity to undertake it. Several new applications from CNDF have meanwhile been presented.

Against this background NORAD decided that it would be necessary to undertake a new and independent assessment, by persons not closely associated with CNDF, of the entire range of CNDF's programme in respect of its concept, effectiveness of implementation, and results. The purpose of this evaluation is to provide a basis for undertaking a consolidation programme, to draw conclusions based on previous experience and to formulate recommendations for future development.

3. OBJECTIVES OF THE PROGRAMME

In this chapter, the Mission attempts to set out the basic premises of the CNDF Programme, and to examine these in terms of the justification of the programme, the ideology substaining it, the long term,intermediate and immediate objectives, identified target groups and the strategy of implementation.

On the basis of this examination the implementation of the Programme (4.1-4.5) is assessed in terms of achievements of objectives and their socio-economic impact.

3.1 Relevance of the Programme

No socio-economic analysis of the target societies at Karainagar took place before the NGU activities commenced in 1967. This is unfortunate because the absence of such data will necessarily affect the Mission's examination of the overall development impact on these communities of the CNDF programmes. It was decided therefore to define at least those socio-economic features of the target area that served as initial justification when the activities commenced, as the starting point for the work of the Mission. These appear to have been:

- the general and very visible backwardness of the area as compared to neighbouring areas;

- the poor standard of housing and visible evidence of malnutrition;

- striking social difference based on casts and sex;

- the acute unemployment situation, created by the closing down of the activities of the thereto busy imports harbour at Kayts;

- the almost complete absence of essential fishing gear among the hand-harvesting fishermen of the lagoon;

- the inadquacy of health services and education and the low level of literacy compared to adjacent areas and the national average:

It was this depressing social picture that evoked the initiative for social action by the young and idealistic representatives of the donors.

The sea and its resources, which was assumed to be largely underutilised, seemed to represent a potential solution to many of the social problems. But ocean resource utilization demanded better tools, boats and gear, as well as knowledge of how to handle such new equipment. Fishery mechanisation and improbe gear became the overruling development strategy, which to this day has been a distinctive characteristic of the services rendered by the CNDF.

3.2 Ideology

The intention of the originators of the programme, a group of young men from Jaffna, was thus to bring about the economic and social upliftment of these communities through the development of small-scale fisheries and fishery-based industrial enterprises. The primary aim was the economic upliftment and social elevation of these economically depressed and socially oppressed groups so as to develop them into economically independant, socially accepted and self reliant communities. This was the basis that lead to the selection of the two original target villages (Thoppukadu and Madathuvalavu) by the originators and the sponsors of the project. The programme as it began to grow, came to comprise not only fisheries development, but more basically improvement of the entire social, economic and nutritional conditions among coastal communities in general. The subsequent decision to support similar projects in other parts of the country was in no way a departure from the original aims of the sponsors but was in fact and extension of the same ideology to a wider geographical area.

3.3 Objectives

In the earlier phase of the Programme from 1967-1970, objectives were stated in a rather vague and unsystematic way in the

course of applications for financial support from NORAD, appeals related to fund-raising etc.

A collection of these statements was compiled by Bibin et. al. (1971) pp 209-212. These were later stated more formally in the Memorandum of Association, which accompanied the establishment of the CNDF in 1971. The new Memorandum recently proposed contains a similar list. Although the character of the Programme has changed substantially during its 13 years of operation, the official idelogy, on the basis of which NORAD and other external Organisations' assistance has been granted, has remained practically intact. The following three-level listing of objectives is intended to summarize the essence of what can now be derived from the available information:

Long-term development Objectives

Improved social and economic conditions and self-reliance for the weaker sections of society.

Intermediate Objectives

- improved nutritional standards through the provision of more and cheaper fish on a low cost basis;

- employment in fisheries through the provision of necessary goods and services;

- improved standards of health, hygiene, housing, education and culture.

Immediate Objectives

- employment and income opportunities in fisheries and fishery-related industry:

- provisions of goods and services for the fisheries.

This listing of objectives is to be understood in two ways. First, the higher level objectives form the premises for the low-level objectives (and these in their turn for the activities

and inputs for the various projects). Second, there is a logical time-sequence among them, so that the lower-level objectives in due time contribute to the fulfilment of higher level objectives.

As no bench mark information or indicators for development were established before the Programme started,it is difficult for this evaluation to quantify the impact. The evaluation will therefore to a great extent have to be limited to qualitative measurement.

3.4 Target Groups and Area

The Programme came about without any systematic planning. A great deal of confusion seems to have existed as to the definition of the target groups. This was partly due to the lack of knowledge of the socio-economic characteristics of the target area when the project started. As far as is known the target groups and areas are as follows:

caste-wise — (in the original programme area, i.e. in Karainagar) Pallas and the poorer sections of Thimilas;

sex-wise — particular emphasis on women;

age-wise — particular emphasis on youth;

welfare and classwise —
i) Unemployed and underemployed;
ii) Malnourished and undernourished;
iii) The poorer sections of the fishery population, in the target areas and in the fishing communities indirectly affected by the Programme through aquisition of its goods and services.
iv) The educationally deprived.

target area :
(i.e. where the Programme activities are directly carried out)

Jaffna	:	Karainagar (Thoppukadu, Madathuvalavu and Oori) Gurunagar (Gurunagar and Vaddukoddai) Thadduwankody
Colombo	:	Mattakkuliya
Puttalam	:	Kalpitiya Wennappuwa
Batticaloa	:	Kaluwankerny
Matara	:	Polgahamulla Nilwella

3.5 Strategy

3.5.1. Project benefits

The objectives listed earlier are intended to result in the following benefits (to be disturbed among the target groups and areas);

- employment and income opportunities are to be created through construction work, production activities, fisheries carried out by CNDF and processing of fish;

- employment and income generated in this way will contribute to the achievement of the long-term objectives, directly or through the intermediate objectives;

- the programme's provision of boats, fishing gear, ice, processing and marketing services to fishermen outside CNDF is intended partly to create employment and income for them as such, and partly to contribute to broader nutritional and socio-economic objectives (i.e. the objectives on the two highest levels);

- the Programme has intended to raise the technical and professional skills of employees and fishermen through training;

- the Programme has intended to stimulate popular participation in the operations, and in general strive towards self-reliance for the target groups and their communities.

All these benefits were to be achieved through the productive activi-

ties of the Programme. Additionally, particular community development projects have been carried out independently of the regular production activities. The benefits aimed at in this respect have been housing, water supply, health and hygiene, basic education and cultural improvement. Some smaller handicraft-projects have also been initiated with the purpose of employing younger women.

3.5.2.Economic Constraints

It is obvious that these socio-economic objectives have, all the time, to be weighed against the financial and economic constraints of CNDF as an economic unit (i.e. as a company). One of the main concerns of this evaluation will be to assess to what extent the programme has succeeded or will succeed in the achievement of its objectives within the limits of the economic realities of the time. In this sense, it should be pointed out that the intention all along was to make CNDF a self-sustaining economic unit. CNDF has been identified as a non-profit making foundation. As such, it has always been expected that profits - after any necessary plough back into the business - would go exclusively to community development within the target areas.

3.5.3.Remarks on the interpretation of the objectives in terms of small-scale fisheries.

The ideology and objectives of this programme bear the trade marks of a small-scale fisheries programme. It is intended to produce a comprehensive package of goods and services, to improve the conditions of poor fishermen and at the same time to create employment and raise nutritional standards. Thus, it represents what an FAO Report on strategies for small-scale fisheries project terms "a comprehensive anti-poverty effort". (Meidell Gerhardsen, 1977). Some observations of the report may be of interest in the interpretation of the objectives of the CNDF programme.

- the chain of goods and services produced should be coherent and symbiotic i.e. that the various elements operate in a mutually advantageous relationship;

- it is of crucial importance that such an integrated approach is applied on the basis of a real understanding of the human,

cultural and social value prevailing in the affected communities;

- the largest number of people, employees, local communities, fishermen, and grass-root organisations should be actively involved in the execution of the programme;

- a symbiotic relationship should be established with other economic activities taking place in the small communities concerned;

- in a project of this nature, primarily geared towards the benefit of poor fishermen, an appropriate low-level technology should be applied: this will enable the target groups to raise the necessary money to aquire new tools, control techniques, and maintain equipment, also such technology has a high capacity to generate employment;

- the knowledge, capacity and experience developed through the Programme must be made directly available to target groups.

Rather than hive off industrious persons out of the fisheries sector towards seemingly more attractive sectors, they should be motivated to stay in the fisheries and create spin-off effects in their communities. Transfer of knowledge should not be limited to training as such, but must lead to diffusion of positive attitudes through its demonstration effect. In the words of the report -"know-how" must be converted into "show-how".

4. ASSESSMENT OF IMPLEMENTATION

4.1. Boat Building.

4.1.1. Introduction.

CEY-NOR currently operates four boatyards, one at Karainagar in the Jaffna District, the second at Kalpitiya, in the Puttalam District and the third and fourth at Mattakuliya and Beira in Colombo. A fifth boatyard at Nilwella in the Matara District has just been completed. This section of the Report contains a brief note on these boatyards followed by a discussion on the choice of boat building materials, the types of glass reinforced Polyester (GRP) and Ferro-Cement boats presently being built in the country and their future development potential and some remarks on costs and markets for fishing vessels in Sri Lanka. The main purpose in establishing the boatyard at Karainagar and later in embarking in fishing operations was to improve the social and economic conditions of the poorer sections of the population of the areas concerned.

4.1.2. Boatyards.

Karainagar.

The founders of CEY-NOR began their boat building operations at Karainagar around 1968/69. Progress during the initial stages was understandably slow as it was an uphill task establishing an industry involving a new technology in a remote country-side without the necessary infrastructure facilities such as electric power, skilled workers and repair and servicing facilities. The first boat to come out of the boatyard in 1970 was one of 38 ft. GRP, and this was utilized for training local youth in modern methods of fishing. This was soon followed with boats of 17½ ft. and 25 ft. also GRP. When there was a substantial increase in the price of this material following the oil price increase in 1973, CEY-NOR began to build ferrocement boats. The first ferrocement boat, with a hull of 28 ft. slid out of the Karainagar slipway in 1974. This was followed by ferrocement boats of 32 ft., 42 ft. and 46 ft. length.

At the same time, the production of GRP boats was expanded and diversified. Output of the Karainagar boatyard from its

inception till October 1980 is summarized below:

GRP BOATS

Type of hull	length ft.	Nos.
FRP trawler	38	7
GRP boat	17½	1300
GRP dinghy	12	40
GRP (Kulla)	15½	10
GRP boat	25	25
GRP 3½ tonner	28	150
Research vessel	62	1

FERROCEMENT BOATS

Type of hull	length ft.	Nos.
FC :	28	6
FC : trawler	32	14
FC : trawler	42-46	7

A detailed statement containing the main specifications and numbers of the various types of boats built by CEY-NOR is included in Annex V , table 1 and area wise sales of boats during the period 1978-1980 in Annex V , table 2. The yard is building approximately twelve 28 ft. GRP boats each month. Layout, description and list of personnel at the boatyard is given in Annex V, tables 3 and 4.

Kalpitiya, Puttalam.

Since its inception in early 1979 to the middle of 1980 sixteen GRP boats of clinker type and twentyfour 17½ ft. flat bottom GRP boats have been built. At the time of the Team's visit there was no boat building activity in Kalpitiya except for the repair of two wooden boats. Thirtyfive employees who were earlier engaged in boat building are still in the yard.

Mattakkuliya, Colombo.

On a directive from the Ministry of Fisheries, this boatyard which was part of the Ceylon Fisheries Corporation and not functioning satisfactorily, was handed over to CNDF on 1st of March 1979 for

management on a profitsharing basis.

. This yard was producing wooden boats earlier, but has now been switched on to the production 28 ft. GRP boats of which 12 are produced each month. The total employment in the yard amounts to 170.

Beira, Colombo.

CEY-NOR had received orders from the Ports authority for building ten 100 tons ferro-cement barges and two 25 ft. petrol boats of plywood. In addition there were requests from the same authority for repair of several steel barges and from UNICEF for the construction of 500 gallons ferrocement water tanks. This boatyard at Beira has been organized to carry on these activities and for experimenting with conversion of sail on the 28 ft. and 17½ ft. GRP boats, work on which has already begun. Development work for a 12 ft. long GRP lagoon type Catamaran canoe is also planned in this yard.

Nilwella, Matara.

This boatyard has just been completed but production has not commenced as yet. It is planned to produce 12 ft. long Catamarans, but the development of this craft and final sea trials are not over.

4.1.3. Choice of Boat Building Material.

The choice of material and method for construction of a fishing craft should mainly be governed by the following considerations:

i) Appropriate resistance against environmental interaction regarding mechanical, chemical and biological properties;

ii) Availability;

iii) Availability of equipment and skills for production and local repair;

iv) Long term properties of the material in regard to expected life of vessel and cost of repair balanced against first cost.

For small boats there is a theoretical choice between wood, GRP, aluminium alloy and laminated wood. From the boat builder's point of view, GRP is preferred for the following reasons:

i) High strength-weight ratio.

ii) Easy to make a watertight structure.

iii) Fairly easy to control quality and progress of work.

iv) Training of labour force relatively simple compared with building in wood, steel and aluminium.

v) Durable material - long life of the boat and little repair needed.

vi) Mass production possible with relatively low cost of equipment.

At the time CEY-NOR started boat building activities, GRP was available at a fairly low price and today CEY-NOR's yards are quite experienced in GRP boat-building. In the subsidy schemes for boats, GRP is also a recognized material and as such any price escalation will be taken into account without being a burden on the boat-builder.

With shortage of oil one would expect GRP to be in an unfavourable position in relation to other materials. However, present trends indicate relatively higher increase in price of timber than for GRP. (FAO, BOBP/WP 9, 1978). Comparing price trends for GRP with those for steel and aluminium there appears to be a little difference.

Thus the use of GRP for mass production of small boats is an obvious choice for a boat yard like the Karainagar yard, experienced in GRP boat building. Building of larger vessels, 30 ft. long or more, is a different matter.

The expected number of larger boats produced will usually be far less than the number of smaller boats. The development cost and the cost of moulds are higher for the larger vessels. The risks involved in entering a large boat project in GRP is therefore

high. Mass production is a must when building GRP.

In a country like Sri Lanka with relatively low cost of labour, ferrocement is a good alternative for one off production or production of small series. Less labour intensive building methods than used by CEY-NOR could be introduced (Pedersen H.P., FTFI, Trondheim 1974).

Aluminium, steel and timber should of course be considered, but as the boatyard has gained considerable experience in ferrocement construction, ferrocement is an obvious choice for construction of larger vessels. (If mass production could be undertaken safely also for the larger fishing boats, then GRP would be the first choice from the boat builder's point of view.)

The ferrocement vessels built at the CEY-NOR yard have shown good performance regarding structural strength in normal operation. Ferrocement has high abrasion resistance, but a ferrocement vessel can usually not withstand concentrated impact loads to the same extent as a heavily built wooden boat. This has also been demonstrated in the case of the ferrocement vessels built in Karainagar. Groundings due to storms have damaged ferrocement vessels, while wooden boats survived. If groundings are expected to occur frequently the keel and bottom structure should be strengthened on future ferrocement boats built by CEY-NOR. Repair of ferrocement vessels is in general easy and fast. Even emergency repair below waterline can be done. For the medium sized boats, approximately 28-35 feet, a combination of ferrocement, GRP and wood could be used. The hull should then be made of ferrocement, deck and superstructure made of GRP and wood.

Production of GRP boats in long series may taper off once the present build-up of the fleet capacity has reached the planned target level. Thereafter, GRP production is expected to be limited to only replacement of boats. At that stage CEY-NOR's boatyards should be in a position to build larger vessels suitable for off-shore and deep sea fishing, trawlers in the first instance. Only a limited number of these will be in

demand. GRP as a boat-building material will presumably be too expensive because of the very limited number of boats in a series. As an alternative to the recommended construction in ferro-cement, wood should be considered.

This will require that CEY-NOR should eventually import timber which anyhow would require less foreign exchange than glass fibre and polyester. Wood grown in Sri Lanka may also be used for boat-building to the maximum possible extent; suitable pressure testing with fungicides would extend the life of timber.

Wood should also be considered as an alternative for the small boats for replacement of canoes for which timber is running short, in particular the flat bottom boats in wood for small lagoon fisheries.

4.1.4. Selection of Type of Boats.

4.1.4.1 Small boats and large GRP vessels.

A cheap boat for the poor fisherman has not been produced by CEY-NOR. Recently a GRP copy of a 15 feet long "Kulla" (out-rigger canoe) was made. This craft will be offered at a price of Rs. 4,500/-. If credit facilities are made available, the GRP "Kulla" may be something for the poor fisherman. However, a better utilization of the GRP material should be considered through modification of the "Kulla" hull.

The one thousand three hundred 17½ feet GRP boats built at the CEY-NOR factory indicate that this has been a very popular type of boat. The large number of these boats has of course created job opportunities both in the boatyard and in the fishery. The existing 17½ footer, clinker-type, could be modified to use sail. This has been tried and seems to work fairly well. A newly established GRP firm "Fibrite Marin" in Point Pedro has already modified the 17½' CEY-NOR boat and is now offering a sail version of it.

"Niel Marine" in Colombo has been successful with a 17½' flat bottom boat. CEY-NOR has tried to make a flat bottom 17½' boat. This 17½-footer is considered more bulky and has less speed

potential than the boat from "Niel Marine". A 18' flat bottom boat has also been introduced. These boats have not yet been able to compete with the boat from "Niel Marine". The lack of success with these boats may be temporary, but a market survey should be undertaken to find out to what extent the moulds could be utilized for production.

At several places along the coast of Sri Lanka a beachable craft of 22-25 feet is needed. A beachable fishing craft of 23 feet is proposed through the FAO "Bay of Bengal Project". One prototype has been tested. Another lighter prototype will be built and tested. Beachable crafts of about the same size are proposed in the "Hambantota Plan". If this "intermediate" sized boat is approved, then the market for 17½' boats may be drastically reduced.

25 feet long GRP boats.

At the time these boats were built (1971-72), GRP boats of that size were not sold in the Jaffna area. The canoe stern was not accepted by the local fishermen and customers in Jaffna for the 28 feet GRP boat, which was built by CFC and "Walkers" in Colombo. Most of the "25-footers" were sold to customers in Chilaw, Marawila and Mulaitivu.

28' GRP boats.

The 28' GRP boat built in Karainagar is a well known and accepted design. Wooden versions were in use more than 20 years ago. The same arrangement is used on much larger wooden vessels in the Jaffna area. Orders for 6 months of production are given to the Karainagar boatyard through the existing subsidy scheme. Future production of the 28-footer is to a great extent dependent upon a continuation of the subsidy scheme. The time may soon come when the 28' boat will be replaced by other boats.

A larger vessel (32') is developed by "The White Fish Authority" for the ABUDABI-Project. Prototypes are under trials. When approval is given for this new type, the market for 28' GRP boats may soon disappear.

38 feet long GRP vessels.

The 38 feet GRP boats were built in order to have a larger vessel for skipjack fishery survey by UNDP and for supplying the Fishery Training School in Colombo with boats. Five boats were bought by the Ministry of Fisheries. One was bought by a private customer and one was used by CEY-NOR. The fish hold in this vessel was considered to be too small and the canoe stern was not accepted by the local fishermen.

Twin engine installation was used to obtain an acceptable towing power when trawling. Twin engine is costly and not at all suitable for a vessel of this size, but was chosen because of impact restrictions.

4.1.4.2 Ferrocement Vessels.

28 feet ferrocement boats.

These boats were not popular among the fishermen due to low freeboard and a tendency to heavy rolling. The maximum size of engine available at that time was 30 HP which was regarded as too small for this boat.

32 feet ferrocement vessel - stretched version of 28 feet ferrocement boat.

These vessels had more or less the same shortcomings as the smaller ferrocement boats: low freeboard and a tendency to heavy rolling. The engines installed were of 65 HP capacity.

32 feet ferrocement vessel - new type.

These vessels were planned to be a replacement of the 38 feet GRP boats. Import of various materials and equipment needed for these boats was rather difficult and whatever that was available locally had to be used. This was also due to the need for conserving foreign exchange and a policy of self-reliance.

These vessels were more complicated than earlier vessels and needed much higher skills. Mechanical winch and electrical lights were installed. The fish hold was insulated. Gully for

cocking was made. Watertank, echosounder and VHF-radio were installed. Specifications were largely in accordance with the requirements from a customer in Colombo. Problems soon occurred with the engine, winches and electrical system.

Until 1978 no subsidy was given on 32 feet long boats. At the moment subsidy is easily obtained on vessels of size 28-32 feet. Larger vessels have to be approved one by one and will usually take some time.

42 and 46 feet long ferrocement vessels.

These vessels are regarded as reasonably good fishing boats as far as layouts are concerned. The GM engines are considered good. Fish finding equipment and navigational aids have been fitted, but the installation of these items has not been successful.

The mechanically driven winches have had frequent breakdowns. For more detailed information of the 42 and 46 feet ferrocement boats see Hinrikson, T.G.: "Report on present status of 42 and 45' class ferrocement boats built by CEY-NOR and my recommendations for improvement".

Fishery adviser T.G. Hinrikson has presented a preliminary feasibility report on fishing operations by the 42 and 46 feet ferrocement vessels. The profitability of these fishing operations shown in this report is promising. See Hinrikson, T. G. : "Preliminary Feasibility Report on Fishing Operations".

The 32 feet new design and 42 - 46 feet ferrocement vessels could be described as a Canadian type of trawler with wheel-house in front. This arrangement is a well-known design and widely accepted but hardly used earlier in Sri Lanka. The introduction of a new arrangement together with a new material was bound to meet resistance. A ferrocement vessel arranged in a similar manner as the traditional wooden vessels in the Jaffna area would have a far better chance of being accepted by the boat owners. On the other hand a foreign design should not harm the operation of a vessel in the CEY-NOR fleet.

Had the larger vessels been able to operate without frequent mechanical breakdown, there may have been a fair chance of acceptance of design and material.

4.1.5. Training of local staff for the Building and Maintenance of the Boats produced.

4.1.5.1 Boats of glassfibre reinforced polyester GRP.

The GRP boat production is carried out by hand lay-up. No spraying equipment is used to apply polyester and glassfibre. Even the gelcoat (outside paint) is applied by hand. The moulds seem to work acceptably well, but the finish is somewhat poor. Although the finish of the boats is not perfect, the quality is assumed to be acceptable for fishing vessels. Boats for export and pleasure crafts need a better finish. The material flow from the stores at present is not at all streamlined. The transport of the boats could also be streamlined. The stiffening system used in hull and other stiffening should be made less labour intensive. Changes have been proposed by the boatyard, but due to the approval system it has been difficult to introduce labour-saving constructions. Some tools and equipment in the yard were out of order.

The high overhead expenditure of the boatyard makes it vulnerable in the present competitive situation prevailing in the country. At the moment orders are channelled by the Ministry of Fisheries to CEY-NOR and the need for efficiency and improvement is probably not felt urgent. When the subsidy scheme comes to an end, the yard may be in a very difficult position. The demand for GRP-boats will then be drastically reduced and the excess capacity and severe competition between the builders make it more difficult for CEY-NOR to survive. To be able to compete CEY-NOR has to be more efficient and preferably offer better quality boats than boatyards which have less overheads and are able to adjust better the volume of the work force to the needs of production.

Skill in product development is of course very important. Even for a small and simple boat, development work must start at least

one year ahead of production. In the future there will be a need for more efficient production, improved quality (finish) and product development activities.

4.1.5.2 Ferrocement vessel production.

Regarding building of ferrocement vessels, there has been shortcomings and failures, but the technique and workmanship today in this material could be considered fairly good. Competition from other boat builders is at the moment no problem. Serious problems are reported with engines, electrical supply, electronic equipment, winches and maintenance of the former mentioned items.

The most serious constraint for CEY-NOR in the production of large vessels is the low quality of systems, material and workmanship regarding machinery and equipment. If the ferrocement boats delivered from Karainagar is able to operate profitably, this has to be greatly improved.

4.1.5.3 Maintenance and repair.

To repair the 46 feet long ferrocement vessel a larger slipway is needed. Skill in repairing ferrocement hulls is available. Extensive hull repair has been done successfully.

The yard is equipped to do welding, lathe work, wood work and installation of electrical wiring and equipment.

To what extent the workers have achieved sufficient skills is difficult to judge precisely. However, the frequent break-downs of equipment and systems on board the vessels indicate lack of knowledge and skills. The need for recruitment and training of skilled workers should be carefully considered.

4.1.6. Costs and market for fishing vessels in Sri Lanka.

The boats in production by CEY-NOR are sold through a government subsidy and loan scheme.

For the 28 feet GRP boat 50% subsidy is given to cooperatives on boat and fishing gear. 35% is given to individuals.

The price of these boats has to be approved by the Ministry of Fisheries. The allowed calculated profit is rather low (15%), and the calculated costs are all the time months behind the actual costs.

The price of glassfibre and polyester has increased by 2.2% on an average each month during a period of 18 months.

In reality there will hardly be any profit at all if the overhead is correctly calculated. See Annex V, table 5. To make boat building profitable, price trends have to be incorporated in the yard's calculations or the customer must pay extra on delivery of the boat. Higher calculated profit than 15% and more frequent adjustment of approved prices may also be a solution for obtaining a real profit of 15%.

Most of the orders for the 28 feet GRP boats have been channelled to CEY-NOR through loans and subsidy given to cooperatives by the Ministry of Fisheries.

The boatyards in Mattakkuliya and Karainagar produce each twelve 28 feet boats per month. Altogether approximately 288 boats per year.

The "Master Plan" estimates introduction of 400 boats of length 28-32 feet and 500 boats of length 12-24 feet each year 1980-83. 50-60% of the needed boat building capacity is covered by the yards in Mattakkuliya and Karainagar.

If the subsidy scheme is stopped, the demand is likely to drop below 50% of today's production.

It is then rather obvious that the CEY-NOR boatyards are completely dependent upon the existing subsidy scheme. A development towards building of a limited number of fishing vessels up to 60 feet will be favourable for the building industry in Sri Lanka. 5 - 6 large vessels could be built each year in Karainagar, leaving the smaller boats to the other yards.

The number of smaller boats built could then be reduced by 25-30% and still maintain the same level of employment in the boat-yards.

The capital needed would increase compared with small boat production.

A development towards building of 32-34 feet boats as proposed for the"ABU DHABY Project" (West Coast) will also be favourable for the boat builders.

4.2. Fishing Gear Manufacture.

4.2.1. Introduction.

After the successful establishment of the Karainagar boatyard, the sponsors of CEY-NOR initiated action around 1972-73 for setting up a fishing net manufacturing unit in the Jaffna Peninsula. At that time, due to balance-of-payments difficulties, imports of fishing nets were restricted and the fishermen, especially in the Jaffna area were faced with considerable hardship in obtaining their requirements of nets at reasonable prices. Investigations revealed that the establishment of such a unit would enable for a given outlay of foreign exchange almost twice the quantity of nets to be produced locally. Besides increasing the availability of nets, the project being economically viable, was expected to generate surpluses which in turn could be utilized for furthering the aims and objectives of CEY-NOR. Other direct benefits acruing from the project were additional employment opportunities, generation of new skills and a contribution to the expansion of activities in the fisheries sector, in which were also concentrated some of the most deserving target groups of the CEY-NOR Programme.

The industrial policy of the Government at that time favoured import substitution and encouraged the establishment of small and medium-scale industries on a decentralized regional basis. This favourable climate enabled CEY-NOR to obtain approval for its fish net project for which foreign funds were provided by NGU and its sister organization UNF of Sweden. The factory, located at Gurunagar, went into commercial production in early 1976.

At its rated capacity the net factory could meet only about 25% of the Island's requirements. Although expansion of production capacity at Gurunagar or a second net factory in the peninsula would have been more advantageous to CEY-NOR from the point of view of management and overhead costs, Government at that time preferred a second factory in the south to further expansion in the north.

CEY-NOR therefore prepared a feasibility study for a second project in the south and sought foreign funding for its implementation.

However, on account of the unsettled political conditions that prevailed during the latter half of 1976 and early 1977, no investment decision on this project could be finalized until the second half of 1977. This second project in the south took the form of an expansion programme which included three net factories to be established at Kalpitiya in the Puttalam District, Polgahamulla in the Matara District and Kaluwankerny in the Batticaloa District.

Construction of the Matara net factory was completed in 1978 and commercial production began in early 1979. Work on the Puttalam factory was delayed as there were some grave doubts about the availability of electric power at the original site. A final decision has now been made to site this factory at Lunuwila further south of Puttalam. Construction work at this site is scheduled to commence shortly. In the meanwhile four knitting machines have been installed in a temporary building at Wennappuwa and two of them have just commenced trial production. According to the 1978 FAO study (Fishing Gear Manufacture in Sri Lanka 10P/TECH/78) on fishing gear manufacture in Sri Lanka the output from the above three net factories would be adequate to meet the entire needs of the Island and as such the proposed third factory to be located at Batticaloa has been abandoned.

4.2.2. The net factories.

One of the major and persistent weaknesses of CEY-NOR has been its narrow equity base. While the foreign exchange requirements for plant and machinery and other imported inputs for capital works were provided from abroad as a grant, CEY-NOR had to depend to a large extent on surpluses generated from its own activities and short-term bank borrowings to meet a substantial part of the local costs. This ruled out the possibility of any major investment in new factory buildings. As a result the Gurunagar factory is housed in an old tobacco store, the one in Matara in a former paddy store while a cooperative society office building was acquired for the Lunuwila factory. These buildings were in no way designed to house twisting and knitting machines which for their optimum performance need an atmosphere where temperature and humidity have to be maintained within specified limits. This

constraint of having to make the best use of the available buildings is reflected in the layout of machinery which from the point of view of flow of materials, working space, safety and security, service connections etc. leaves much to be desired.

Much of the principle items of machinery too had been purchased second-hand as would be evident from the table below:

Table 1: Machinery used in the net factories.

Machinery	Number of machines		
	Gurunagar	Polgahamulla	Lunuwila
Knitting machines - second-hand	14	7	-
Knitting machines - new	3	7	10
Twisting machines - second-hand	5	-	-
Twisting machines - new	-	5	5

A complete list of all the knitting machines together with their principle specifications is given in Annex VI.

From this Annex it would be seen that at Gurunagar 5 out of the 17 knitting machines are over 20 years old, another 9 over 15 years leaving only 3 new machines. The situation at Matara is slightly better in that seven out of the 15 machines there are new. All the machines at the Lunuwila unit, however, are new. While the Matara and Lunuwila units have new machines with adequate capacity for stretching, pressure dyeing, washing and drying, Gurunagar has only some second-hand machinery quite unsuitable for the manufacture of a quality product and whose capacity is inadequate to process even the present output of the factory.

In order to replace the older machines at the Gurunagar factory and install a depth stretcher, pressure dyeing machine, ring twister and cablers for rope making, it is estimated that an investment of approximately Rs. 12 million at current prices will be needed.

It would be evident from the foregoing that CEY-NOR's net factories, especially Gurunagar and to a lesser extent Polgahamulla, have certain in-built disadvantages. One redeeming feature in setting up this industry in this manner in virtually improvised buildings and with second-hand machinery is that investment has been kept down to a minimum level. At the same time there is also another positive advantage - the maximisation of the process of absorption and diffusion of industrial technology. The renovation of the buildings, the layout of the machinery and their installation, testing and commissioning, the provision of services (water, power, etc.) and the organization for operation were all carried out by the employees of CEY-NOR with outside assistance being confined to the services of two expatriate personnel for a short period of three weeks. This is no mean achievement for a small organization which had been in existence for only a few years. This expertise gained at Gurunagar has not only enabled the satisfactory installation of machinery at the other factories, but also the training of operating crew without any expert assistance from abroad.

4.2.3. Production.

The output of fishing nets from the Gurunagar factory and its value during the (calendar) years 1978 and 1979 and the first ten months of 1980 is given in the table below:

Table 2: Output of fishing nets from the Gurunagar factory.

Year	Number of pieces	Value in Rs. M.
1978	30,735	5.801
1979	30,570	6.534
1980 (10 mths.)	32,209	9.156

From the above it is evident that there has been an almost 30% increase in the number of nets produced during 1980 in comparison with the previous two years. At the same time the unit value of production has increased from about Rs. 214 to Rs. 284. Production at the Matara factory, which began in 1979, is being gradually stepped up, and during the first ten months of 1980

approximately 11,000 pieces valued at Rs. 4.7 million have been produced. A large percentage of the nets produced at this plant are of high ply and therefore the unit price is around Rs. 430.

The installed capacity of any net factory, where a wide range of nets are manufactured, has to be expressed in terms of a definite product mix. Determination of capacity with any reasonable degree of accuracy is an involved process requiring time studies etc.,and CEY-NOR has not carried out any such studies so far. Nor had the Evaluation Team the time to go into this problem in detail. The team was told that the installed capacity of the Gurunagar factory is of the order of 90,000 nets per annum. The attainable capacity, however, is likely to be very much less. The actual output, as evident from the above table, is only about 30% of the installed capacity. This is largely due to frequent break-down of machinery-most of which have long passed their useful life - variations in temperature and humidity causing frequent breaks in yarn, a very wide assortment of nets produced in small batches with its attendant high down-time for machine setting, frequent power failures, high rate of absenteeism and finally lack of funds for purchase of adequate stocks of raw materials and spares for want of which the factory had often to idle.

4.2.4. Employment and Work Organization.

The number of employees at the two net factories classified under the major grades are tabulated in the next page:

Table 3: Employment at the net factories.

	Gurunagar			Polgahamulla			Total		
	Males	Fem.	Total	Males	Fem.	Total	Males	Fem.	Total
Managerial-Admin.	1	-	1	2	-	2	3	-	3
Managerial-Tech.	2	-	2	1	-	1	3	-	3
Supervisory	11	-	11	16	-	16	27	-	27
Clerical	6	6	12	1	3	4	7	9	16
Skilled	127	55	182	88	37	125	229	98	327
Unskilled	14	6	20						
Trainees	13	-	13	-	-	-	13	-	13
Total	274	67	241	108	40	148	282	107	389

The production departments of Gurunagar operate 3 shifts on all seven days of the week while the Polgahamulla factory also operates 3 shifts but for six days of the week. The ancillory and service departments operate only during the day shift. Female employees at both factories are rostered for work only during the day shift, i.e. from 8 a.m. to 5 p.m. and the morning shift from 6 a.m. to 2 p.m.

On account of the limited time, the team did not go into the details of work organization in the net factories. The management is aware of the present shortcomings and a proposal is under consideration for a complete re-organization of both the head office and the individual factories. This needs to be expedited to improve productivity and thereby the competitiveness of the net factories.

4.2.5. Investment and Profitability

The capital investment in fixed assets in respect of the 3 net factories, as at 31st March 1980, is tabulated below:

Table 4: Investments and assets at the net factories.

	Gurunagar		Polgahamulla		Puttalam	
	At cost.	Depreciated	At cost.	Depre.	At cost.	Depre.
Land and Buildings	0.418	0.418	0.426	0.426	-	-
Plant and Machinery	1.845	1.405	2.208	2.175	11.792	11.792
Motor Vehicles	-	-	0.351	0.316	-	-
Tools, Implements etc.	0.085	0.074	0.056	0.047	-	-
Total	2.348	1.897	3.041	2.963	11.792	11.792

(All values in Rs. million)

Although the depreciated value of the fixed assets of the net factories is only about Rs. 16 million, the replacement value would be of the order of Rs. 60 million.

From the P and L statement for the Gurunagar Factory (Annex 1, table 6). it would be seen that this unit has recorded a net profit of Rs. 1.2 million on a turnover of Rs. 3.97 million during 1977, the first year of full production. This was no doubt partly due to the protective measures in force at that time which enabled CEY-NOR to fix its selling price with a comfortable margin of profit. However, since 1978, as a result of competition from imports and the necessity to reduce the selling price, the operating profit on a much higher turnover of Rs. 9.54 million in 1979/80 has been reduced to Rs. 0.13 million.

4.2.6. Market.

In order to evolve a strategy for the future development of fishing net manufacture in CEY-NOR, it is first necessary to have a clear picture of the market. For this purpose two recent

surveys are available, one the FAO Survey of 1978, and the other the Ministry of Fisheries Master Plan of 1980. The estimated requirements of nets, local production capacity and the balance that needs to be imported for the years 1979-1982 are tabulated below:

Table 5: Market prospects for nets.

	1979	1980	1981	1982
	(No. of pieces in thousands)			
FAO Estimates - requirements	143	143	146	154
Master Plan - requirements	277	299	239	239
Production capacity	70	150	190	230
Balance requirements	207	149	49	7

As noted earlier, realistic estimates of installed capacities and attainable capacities of CEY-NOR's net factories were not available to the team and for the purpose of this exercise the best assessment available on a rough and ready basis is used. The team was informed that at full production levels the approximate daily output of the three net factories and that of the public sector unit would be:

Gurunagar	-	300 kg
Matara	-	500 "
Puttalam	-	500 "
Public Sector	-	300 "
Total		1.600 kg

Under the conditions prevailing in Sri Lanka today it is unrealistic to assume 100% output efficiencies: 80% would be a better working figure. On this basis and assuming 300 working days a year, the total output of nets within the country would be 394 tons per annum or about 150,000 pieces.

At this level of output, if the demand is as forecast by the FAO survey, the existing production capacity would be just adequate

to meet the entire requirements of the country. It is only when the demand is much higher as anticipated in the Master Plan that imports and/or additional production capacity would be needed.

In the meanwhile, from the second half of 1977 there has been an unrestricted flow of imports of all goods into the country including fishing nets. Imports of fishing gear which was 251 tons in 1977, had increased to 447 tons in 1978. Although there was a slight drop to 297 tons the following year, there appears to be still a sizeable volume of imports. The team was informed that there is a considerable demand for imported nets and a marked consumer preference.

Besides, the major importer of nets, unlike CEY-NOR, carries a large stock, a better marketing organization and therefore is in a position to provide a better service to the customer. Moreover on account of the inherent limitations of the old machinery in CEY-NOR's Gurunagar and Polgahamulla factories, the nets produced on these machines would not be able to compete quality-wise with imported nets.

In addition to liberalization of imports the Government has also approved some additional requests for net factories. In view of the foregoing, CEY-NOR may in the very near future find its share of the Sri Lanka fishing net market drastically reduced. The first unit to suffer in such an eventuality would be the Gurunagar factory on account of its low levels of productivity and relatively poor product quality.

Assembly of long lines on a contract basis for export was undertaken at the Gurunagar factory sometime back. It provided employment for about 70 women. However, the customer has now set up an assembly unit at the Free Trade Zone at Katunayake which is more advantageous to him from the point of view of shipping. The unit at Gurunagar has been virtually closed and all the employees retrenched. CEY-NOR should take all possible steps to obtain a waiver on import duty for raw materials for this unit, so that it could once more become competitive visa viz. the unit in the F.T.Z.

The design and fabrication of all the tools and fixtures for the assembly of long lines have been carried out by the technical staff of CEY-NOR displaying considerable initiative and innovation. As this operation is highly labour-intensive, the marketing department of CEY-NOR should explore alternative markets to utilize this productive resource at the Gurunagar factory. In this search for new markets they could make use of the good offices of NGU.

A model for this type of activity, which is more in keeping with the aims and objects of CEY-NOR, already exists in the Gurunagar Net Manufacturing Centre, which is run by the Gurunagar Fishing Development Society. Nine girls are presently engaged in the manufacture of Polypropolene nets for trawler fishing. In the Gurunagar area there are about 200 boats engaged in trawler fishing, and each boat has about 2 or 3 polypropolene trawler nets and appreciable quantities of replacements are needed. As these nets cannot be manufactured in any of the nylon fishing knitting machines, this society has a ready market. Their main problem at present is the importation of the various sizes of polypropolene twine and in this CEY-NOR could render some valuable assistance.

4.3. Fishing Operation.

4.3.1. Objectives.

4.3.1.1 Initial objectives and target groups.

The most obvious problems registered in the project area in the initial stage were:

- underdevelopment
- lack of income sources
- mal- and undernourishment
- need for improved technical equipment and ability to handle it.

This in combination with the understanding that the target population was engaged in fishing, contributed to the decision to commence fishing activities within the project.

In fact all other fishery-related activities performed within CEY-NOR-boatbuilding, net-making and ice production, have been a spin-off from the initial engagement in fishing and a registration of development constraints within that sector.

The first activities were planned to be fisheries training and demonstrations where introduction of new equipment, especially engines, was an important factor. Boats, engines and gear were imported from Norway, and training courses were carried out within navigation and engineering.

Later, when the severe difficulties facing the sector and the target population and their welfare needs were registered, the fisheries training activities stopped. The operation turned to pure commercial fishing, representing a source of funds needed for the fishery service and society welfare activities. Profits from fish resources harvest were anticipated to be the most easily available in the area, provided that the technology in use was sufficiently efficient.

This set out the CEY-NOR fishing activities with one of the country's most modern trawler fleets as we find it today, but with very few of the initial aspirations fulfilled.

4.3.1.2 The present set of objectives.

It should be stated, however, that still a certain set of aims and aspirations beyond the pure commercial targets with CEY-NOR's fishing activities are alive within the organization.

These aspirations have lifted themselves out of the local community level at Karainagar and become nationwide. The trawl technology introduction has, maybe unconsciously, been accepted as an objective at the expense of small scale assistance objectives, and the market has become a target rather than the poor fisherfolk.

So, at present, overruling all the other objectives, is the condition that the operation must show profit. In other and simple words; the bundle of objectives has been altered so as to serve the conditions of a viable profitmaking operation; a true but also necessary shrinkage in aims if that overruling principle shall be focused.

4.3.2. The Operation.

4.3.2.1 Technical status.

Vessels.

The fishing fleet consists of altogether 11 vessels; 5 ferrocement (FC) boats of 45 ft.,[x)] 2 glassfibrereinforced plastic (GRP) and timber boats, 38 ft., and 4 FC and GRP boats, 25-32 ft. in length (see Appendix VIII).

4 of the 45 feet boats and 2 of the smaller boats are out of operation, mainly due to technical problems. The 2 smaller ones have had their engines removed and replaced into other vessels in the fleet. The fifth 45 ft. boat, at present in operation, is also facing frequent breakdowns which reduce the output seriously.

The smaller boats which are operative, have not been utilized to their full extent for reasons which will be discussed below.

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x) These 45 ft. vessels are identical to what is referred to as "the 42"-46" ft. class of vessels".

It is quite obvious that the 45 ft. boats, which at present represent the core of the fleet, have not been functioning as could be expected from relatively new boats. None of them have had a reasonably long period without breakdowns which have reduced their fishing capacity. The idle periods have had a tendency to be very extensive, probably due to difficulties in obtaining spare equipment. There is also reason to believe that the technical and personnel resources as well as the capacity to organize repairs and necessary purchases have not been sufficient to handle the problems.

The catch statistics from 1979 show that the 45 ft. vessels together had 34 out of 54 months when they were not working at all. In addition there is a considerable reduction in fishing days in months when some fishing took place. (One of the vessels was lost in June 1979, whereby 6 months have been taken out of the statistics.)

During the first 6 months of 1980 the vessels have been operating at a rate of about 80% of reasonable rate, which is expected to be 20 days a month. In the latter part of the year all the 45 ft. vessels have been completely idle, apart from a minimal operation in Colombo, with a total gross income of Rs. 30,000. Lately one of the vessels have come into operation at Karainagar, while the other three are still idle, due to different technical problems.

It is of course of great interest to disclose the reasons for this technical debacle. The most frequent breakdowns as they are given in different reports are:

- electrical short-circuits and leakages which cause burn and failure of electrical and electronic components (motors, relays, generators, radios etc.);
- breakdowns in pumps and pipes;
- engine and bearings breakdowns.

The frequent electrical and pipe/pump problems originate in the economic situation prevailing in the country when the boats were built. At that time imports were restricted and it was impossible

to have import licences for marine quality of electric wires, switches, fuse holders etc. The boats were therefore fitted with ordinary domestic quality of such equipment. For the same reason ordinary steel pipes and brass valves have been fitted.

This represented of course a serious technical problem to the builders and fitters of the boats, and it should have been dealt with at a higher level within the organization at a time when a decision was made to purchase such inferior material.

The building programme continued, however, and the two boats completed in 1980, one for sale and one for CEY-NOR's use were also fitted with the same kind of material.

Inferior quality of fuel and lubricating oil has been a main reason for the frequent engine problems. Mostly the failures have been due to particles and dirt in the oil. This reason has been disclosed at an early stage, but no remedies, filters or drainage systems onboard or ashore, has been installed.

The resulting problems and bad fishing behaviour have obviously caused a setback for the reputation of CEY-NOR built FC-vessels, eventually also of ferrocement as a boatbuilding material in Sri Lanka. This is regrettable, since a good demonstration from the funds spent on developing these boats in this country where timber is scarce, could have represented a big step forward for the fishing industry.

The standard of the smaller vessels varies. Some are of a reasonably good technical standard while some have been more or less permanently "abondoned" as their motors have been taken out and mounted in some of the other vessels. All of the boats are in need of proper preventive maintenance.

Gear.

The operation has the following gear at its disposal:

- 24 trawls of different types, high opening, shrimptrawls and midwater;

- 1 purse seine for small species (mesh 5 mm) 220 fathoms long, 14 fathoms deep;
- ca 200 gillnets of different types;
- a number of long lines equipment etc.

The trawling operations were short of appropriate bobbins (bottom chain) gear.

The need for rehabilitation.

It has become evident that if the 45 ft. FC vessels shall have a future at all as fishing vessels, a considerable technical rehabilitation is necessary. Since the hull of the vessels seems to be in fairly good condition, the alterations will mainly be on machinery and other technical installations.

According to calculations by the CEY-NOR fisheries adviser, the costs of refitting proper equipment will on an average amount to Rs. 750.000 per boat. It is however recommended that this operation shall be evaluated in detail for each of the boats so as to make an exact estimate of the costs involved. Whether such a rehabilitation shall take place will also depend on other than pure technical considerations. This will be discussed in the following.

4.3.2.2 Personnel.

The entire fishing operation employs 62 persons:

1 operation leader ("master fisherman")
10 skippers and mates
4 engineers
40 crewmen
5 gear menders
2 store-keepers.

The personnel turnover has been minimal; the training activities, and the numbers trained have not been upto expectations. In fact, the skippers, mates, engineers, and the crew members are the same who were trained in the fishermen- and engineer courses held in 1969 and -70. 2 of the skippers have joined short term fishery navigation courses in Singapore.

The skippers, mates and engineers hold approved certificates issued by the Port Authority on the basis of an examination. Knowledge gained through the above mentioned courses has been responsible for the success at this examination.

At present the Section Manager's (Master fisherman) post is held by one of the skippers trained in Singapore. It is evident that the fishermen with so many years of fishing experience are now capable of handling the boats competently in fishing operations.

However, this problem becomes more crucial when the managerial capabilities within the operation and at higher levels are considered. It is not so much a question of personal qualifications which may be excellent, but whether the personnel have been sufficiently trained in managerial aspects. So far it is obvious that this is not the case. Not only has formal training been absent, but also the organizational "infrastructure" needed for such a training programme non-existant.

This, in the opinion of the mission is a major task which must be given the most serious consideration.

4.3.2.3 Operational routines.

Fish sales.

Sales of fish caught by the Fishing Department will be to the Fish Processing of Marketing Department when vessels port at Karainagar. When landings take place at other harbours, sales are made into the market, and if possible, it is forwarded to the foundations's own sales outlets. Sales within CEY-NOR take place at fixed prices, while the open market prices vary. However, the recently introduced system of maximum prices limits this variation.

Maintenance.

The periodical maintenance of the vessels is the responsibility of the maintenance section which is under the boatbuilding department at Karainagar. Preventive maintenance schedules have been made. The vessels were planned to be taken out of operation after a certain number of running hours (3000). But

the routines have frequently been upset by emergency repairs and the system could never be implemented in a proper way.

General Motors does not have a service operation in Sri Lanka. Temporary service of the main engines of 45 ft. vessels is therefore performed by a repair yard in Colombo. It would be advisable for an eventual future fishing operation to have a separate maintenance section within the Fishery Department.

Repairs to gear have been functioning satisfactorily. The menders seem to have been well trained. During a period when no operation mending was needed, they have been engaged in shrimp trawl mounting for sale in the market. These trawls have, however, not been sold.

Whether a technology is too complex for those who have to operate it, will depend on whether they are competent to handle the complementary organization for that particular technology. In the case of the operation of 45 ft. vessels, a relatively complex technology compared to the 28 ft. boats in use, it is evident that the organizational ability is not adequate in many respects.

This is the case in areas such as:

- ability to create and maintain report routines;
- ability to plan operation and implement preventive maintenance routines;
- ability to take and to delegate responsibility.

It is here, as in many other development projects, that it is necessary to review these questions seriously.

Information routines.

A striking impression of the mission is that even though a lot of detailed information on trips, catches, sales, values etc. have been gathered, it has not been used to make a coherent analysis of operational costs as that any cost over-runs could be identified at an early stage. This may also be valid within other areas of the CEY-NOR activities.

Decision routines.

There is at present no formalized system for decision-making, and even minor decisions tend to be referred to higher levels, which is not a satisfactory arrangement and needs to be remedied for ensuring better operational efficiency.

There appears to have been some confusion about the role of the expatriate advisers. The tendency has been for them to take over some of the management functions directly without any clear lines of demarcation between advisers and master fisherman. Differences in opinions by subsequent advisers have tended to discontinue operational programs.

Organizational problems.

We have pointed out several technical problems facing the fishing operation. These technical problems are visible; so is the ability to solve them by technicians. The organizational competence within the operation is not quite so apparent, even though the complexity of technology and organization usually complement each other.

4.3.3. Finance.

For a more exact examination of the financial side of the operation see Appendix XII; tables 1, 4, 12 and 14.

4.3.3.1 Economic results.

The fishery operation has never showed profits. From 1977, when the expansion of the fishing activities started and upto March 1980, annual losses have varied between Rs. 160,000 and 1.4 million.

There appears be two reasons for this:

1. A production deficiency. This seems to be more due to a fishing time deficit than to a low catch rate per fishing hour.
2. A steep rise in running costs, primarily fuel. The effects of fuel price increase has been made worse as the new vessels and the trawl technique are more fuel-consuming compared to other methods.

4.3.3.2 Direct costs.

The trawling operation seems to have been caught up in a vicious circle of low efficiency and rising costs. The rise in costs is especially felt on fuel since trawl towing is a fuel consuming way of fishing. This is a painful truth to many trawling operations around the world.

One trawling hour at 3/4 speed (incl. navigation hours) will for the 45 ft. vessels cost Rs. 290, in fuel only. At 1980 prices, this represents 60 kgs of fish, a high quantity when (an optimistic) future catch estimate indicates 150 kgs catch per trawling hour.

Other direct costs will be:

Ice		Rs. 360 / day
Fixed salaries	crew	" 105 / day
"	skipper and engineer	" 100 / day
Food allowance		100 / day
Luboil and grease etc.		" 35 / day
		Rs. 700 / day

The crew's share of catch is 10%.

4.3.3.3 Overheads.

In addition to direct costs the operation involves a considerable amount in overheads, both specific (within the Fishery Department) in the form of depreciation, maintenance etc. and general overheads of the CNDF total administration.

The tendency to have a bigger administration within the foundation have increased the general overheads from year to year.

For a more detailed study of the overheads see point 4.3.3.5.

4.3.3.4 The small vessels.

The small vessels have also been a victim of the rising fuel costs. As the distance between port and fishing grounds is rather

long, and as these vessels do not have facilities for trips in excess of 24 hours, the fuel costs per unit catch have had a tendency to be rather high. This has, in turn, reduced the income for the fishermen because fuel costs are deducted before share of catch to them is calculated. Consequently the fishermen have been reluctant to enter these boats even when 45 ft. vessels have been out of order.

Of course these facts also cast doubts on the viability of the small boat operation itself.

4.3.3.5 The future viability of the 45 ft. operation vessels.

A feasibility report made by CNDF's Fishery Adviser on the request of the Mission (Hindrikson, 80) states the following capital investment per 45 ft. trawler and its annual depreciation requirements.

Table 5: Capital investment in one 45 ft. FC-trawler. (Rs. 1.000)

	Cost		Depreciation
Hull	650	10 years	65
Engine	450	5 "	90
Deck Machinery	100	10 "	10
Instruments	200	5 "	40
Fishing Gear	100	1 "	100
Total	1.500		305

After refitting of the vessels at a cost of 750,000/- rupees, the total depreciation per trawler is estimated to be Rs. 450,000/-.

The annual costs of the operation based on 180 fishing days + 70 days' navigation = 250 days, are been estimated to be:

Table 6: Cost of operation, one 45 ft. FC - trawler (1.000 rupees).

Fuel Oil 450 l. day 250 d.	500
Lub. Oil & Grease	50
Ice - 180 tons at Rs. 360/-	65
Insurance 2%	41
Wages	61
10% Share of Catch	243
Administration & Service	40
E.P.F.[x] 10%	35
Maintenance	150
Depreciation	450
Welfare	22
	1657

x) Employees Provident Fund.

A revenue of Rs. 2.430.000/- is expected. This will be the result of 1800 towing hours (180 days x 10 hrs/day) and a catch of 150 kgs per hour. The revenue is calculated at a price per kg of Rs. 9/-.

According to the report, this should give a profit of Rs. 773.000 before general overheads.

Both the investment and cost calculations seem acceptable. But doubt may be raised on the revenue side where catch per hour as well as price kg seems to be at the high side. A comparison with the actual figures for the first 6 months of 1980 is the basis for our doubt.

Table 7: Catch revenue from 45 ft. trawlers during the period from Jan. to June 1980 (metric tons and Rs. 1.000/-.

	No. of days fished	Kg total	Rs.	Kg/day	Rs./kg
CN 41 "Arne"	141	102.000	478.000	725	4,70
CN 43 "Kjell"	11	4.500	21.000	410	4,67
CN 44	87	56.500	262.500	633	4,65
CN 45	133	82,500	378.700	620	4,60
Budgetted operation	90	135.000	1.215.000	1.500	9,00

Source: CEY-NOR Fishing Department Catch Report 1980.

It can be seen from this table that both quantity per day and price per hour is approximately doubled as compared to the real results achieved during the first half of 1980, a period which seems to have been the best in the entire history of the operation. The Mission, on the basis of these figures doubts the viability of an operation of this kind, especially since trawling operation is very sensitive to rising fuel costs.

It has been mentioned that according to registered fuel consumption, the real efficiencies while at sea is about 1/3 of what is technically possible. However, if that is the case, still it will be very difficult to double this efficiency overnight, even though this is necessary if the operation is to be profitable.

Unless the quantities and prices stated in the report mentioned can be given a much more firm confirmation, the trawling operation remains a very risky enterprise. Under no circumstances should more than one of the vessels be rigged for the fishery before viability is determined.

4.3.3.6 The present financial situation and the margins for improvement.

As exhaustively dealt with elsewhere in this report, the financial situation within the foundation is not very bright. The actual fact is that there are no resources available at present for an improvement of the serious technical shortcomings which threaten to close the operation permanently within a very short time.

It is therefore both confusing and disappointing to see that when a sum of Rs. 600,000/-, the insurance sum for the wrecked CN 42 "Svein", is made available, it is not utilized to bring one of the other boats into operating condition, but to finance a fishing adventure off Colombo involving trawling operation by all the 45 ft. vessels although reports (Blindheim et al. 1978, 1979 and 1980) indicate unfavourable bottom conditions and poor resource access for trawl gear in that area. The allocation of a sum of this magnitude for such a risky purpose, under the

prevailing conditions, should raise questions about the nature of the information available on which the decision was taken, or the operational insight within CEY-NOR executive levels. An operation including 1 to 2 vessels would have been understandable.

4.4. Fish Processing, Marketing and Consumption.

4.4.1. Objectives and Target Groups.

As will be seen from statements elsewhere in this report, the initial aims with the erection of a processing department under CEY-NOR management fell within the following main areas:

- nutritional improvement
- income betterment
- employment opportunities.

The target area involved was primarily Karainagar, but for some objectives, i.e. nutrition, it embraced the entire Jaffna District. The target resource was the shrimps and prawns[x] in the lagoons and shallow sands of the Karainagar area.
The strategy with which the objectives was intended to be reached will be seen in the following discussion.

The social target groups to be reached by the CEY-NOR processing strategy are also of different kinds.

- Fishermen in the Karainagar area, especially the poor groups with very unsophisticated fishing gear or with no gear at all (hand pickers). For these groups improved and more stable income from shrimp fishing should be obtained.
- Young unemployed women in the same area, who through the shrimp processing could be given employment and professional training on a district relevant field of industry.

For the establishment of the processing unit it is doubtful that nutritional objectives played any role at all in the beginning when shrimps was the sole target resource. Later when fish was introduced in processing, that aspect became more focused.

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x) The question of distinction between shrimps and prawns is a question of size where prawns are the bigger. Hereafter the word shrimps will be used as a general expression for both shrimps and prawns.

The priorities of objectives and targets is difficult to find out, but it is obvious that employment and income opportunities (to fishermen) have preceeded nutritional objectives.

4.4.2. Markets.

The CEY-NOR market behaviour has been, due to its objectives, of a rather peculiar nature seen from a commercial point of view. It is therefore of interest to split the rough "market" concept somewhat.

First, all the markets in question here are of two kinds, the purchasing market and the sales market. Also, and in another perspective, a shrimp market (export), as weell as a fish market (domestic) is found. This may seem obvious but with the special objectives under which CEY-NOR works, it seems necessary to underline this aspect. It should be enough to mention that CEY-NOR on the shrimp purchasing market, for the sake of the fishermen's income objective, adopted the commercially irrational strategy of paying more for the fresh shrimps than necessary; at times they even paid prices which were not even expected to be covered on the sales market.

4.4.2.1 The shrimp market.

Purchases.

The objectives here were, as indicated, to raise the prices to the fishermen to an acceptable and stable level. The strategy chosen to obtain that goal was frontal: a price war against the middlemen. In 1974 when the shrimp market collapsed, CEY-NOR tried to secure the fishermen's income by paying higher prices than could be covered by the export markets. The whole price competition strategy became a very costly one, which may have depressed other acitivites within the programme. The total loss on this operation has been reported to be about N.kr. 300.000,-.

At present the good sales markets are back, but the purchasing market has become very competitive, and CEY-NOR has proved unable to compete. From a social objective point of view, it should not be necessary for CEY-NOR to work on that market any more, maybe just to be present as a guarantee for a certain

minimum price level. The critical feature is, however, that this strategy to stay out of the shrimp purchase and processing is absolute contradiction to the other objective: to create jobs for young women in the area.

Sales.

The most obvious characteristic of the shrimps luxury food market is its lack of stability with a great portion of speculative business involved. In such a market the small suppliers tend to be the loosers. Firstly, because it is necessary to use a considerable amount of resources to be in permanent contact with the market, secondly,because exessive financial resources are needed to withhold stocks in low periods. Ability to render stable supplies is also an absolute advance.

In general one may say that very few commodities face greater risks, both financially and technically, than frozen shrimps and prawns. It should be enough to point at the hygiene and temperature risks involved in the processing and distribution.

CEY-NOR has faced problems in its attempts to fill the market requirements. It has not been able to supply its customers throughout the year due to seasonal fluctuations in supplies, whereas the competitors, processors in Colombo, have been able to buy from different parts of the island around the year, thus being able to supply their customers on a steady basis. This was to represent a more reliable source of supply than CEY-NOR has Cey-Nor,therefore, even from a commercial point of view, had competition disadvantages. In addition come the technical disadvantages faced. The critical period started in 1974 when the market collapsed. Since then it has been difficult to obtain stable relations with customers. One reason for this may have been of a quality nature, but the mission has not investigated that aspect.

Many solutions have been tried on the market side, among them a contract relationship with a Thai-Norwegian venture.

Later a Danish company have bought cooked, peeled prawns regularly, but such products are considered inferior and are paid accordingly. The prices offered from Denmark at present are not workable and the relation has come to a standstill.

The shrimp market situation is difficult, consequently there is no purchase for processing at present, even though the season has started, and people at Karainagar themselves are marketing shrimps in Colombo, chilled with CEY-NOR ice.

4.4.2.2 The fish market.

The fish market, although it is served mainly for commercial purposes, has a certain nutritive objective. The erection of fish stalls at Karainagar and Jaffna for the service of the local consumers is in line with that purpose. But at those stalls, particularly at Karainagar, the nutritive objective was in contradiction to the profit motive since the sales there were subsidized by the foundation.

The market where nutrition and profit motives could be combined, was found in Colombo among the high income classes there. The two fish stalls there, taken over from CFC, have received fish from the vessels (iced or frozen by the processing department). This has mainly served the well-off classes, even though some species like fresh sardines was sold relatively cheap.

Hotel Intercontinental in Colombo has been another important customer for articles like shrimps and crab meat. Certainly no nutritional aspects are involved here, but the contact has created employment at Karainagar.

The most severe problem in CEY-NOR domestic market has been its failure to render a stable supply to its retail stores, especially Jaffna and Karainagar. This is a very crucial point of responsibility in a protein necessity market, but the failure originates in the technical problems with the vessels (discussed under point 4.3).

4.4.3. Processing.

The processing facilities for shrimps at Karainagar are small, compressed and difficult to operate rationally. The operation is, in confirmity with its employment motives, not mechanized.

Its freezing equipment is:

2 freezing rooms whereof one is used as a freezing tunnel each 60 m^3 (installed 1973).

1 plate freezer (theoretical capacity 1000 kg/24 hrs; practical yield under 50%) (installed 1973).

1 chilled raw material store ca 100 m^3.

5 - 30 HP DORIN Compressors (installed 1973).

1 ice-machine "Svalbord" theoretical capacity 12 tons/day, practical yield about 50%. Compressor EUSA 50 (installed 1977).

The equipment is in need of repair and preventive maintenance.

The operation employed 80 women at maximum; only 4 are permanently engaged. The rest are employed on a casual basis and have faced unemployment for long periods, with the present supply conditions one may fear that this will be of a permanent nature.

It is difficult to say whether the organization of the shrimp production, which is complicated and which demands a high degree of minuteness in size and quantity controls, has been satisfactory.

The information process (from department to superiors) is characterized by a high degree of casualness where no fixed system of information is laid down. What is found here resembles to a high extent what was found in the fishing department on the same area.

The processing constraints have mainly been on the technical side. Insufficient electrical supply (due to oil crisis with full stop of the diesel driven power stations) has severely hampered the activities at times. Shrimps have even been destroyed for this reason. Water supply has often been another problem. Water has during critical periods been supplied by tank van, both for processing, ice and for hot gas condensing purposes.

4.4.4. Ice Plant Programme.

The ice plant programme consist of the following projects (Karainagar plant not included):

i) Gurunagar: Completed and in operation, but operating at only 50% of technical efficiency. This is partly due to insufficient cooling capacity in the condensers, malfunctioning of expansion valves.

ii) Kalpitiya: Erection of machinery completed and insulation almost finalized. Diesel generator purchased by CEY-NOR, but some mounting and repair necessary. Water available.

iii) Nilwella: Machinerymounting completed but insulation work not completed. Water not connected. Generator purchased by CEY-NOR.

iv) Colombo: Not erected.

v) Kaluvankerny: Not erected.

Since the only plant in operation is in Gurunagar, it is difficult at this stage to judge future viability and impact of these projects. They are anyhow being established within the Government's programme for 69 new ice plants of varying sizes to be established in the country.

The type of ice in demand varies with its use. In processing plants, at landing places and for repacking of fish for transport to markets plate,- or flake-ice is preferred. But when the coastal fishermen needs to carry ice for his fishing operation, mostly from remote villages, block ice is preferred as it permits easier handling and longer storage, due to the lower surface exposed to the warmer surroundings. This fact is repeatedly confirmed in the fisheries, and should be attended to through a national manufacture of block ice equipment and tanks to be combined with imported refrigeration units. It could be a practical solution, easy to operate, and a contribution towards reducing the high postharvest losses in the coastal fisheries.

Insulated containers for ice and fish is another item which would land itself to local production by women and which should be introduced in the fisheries to save on ice and to maintain the quality of fish.

4.5. Community Development.

4.5.1 Objectives.

Deriving from the intentions of the originators and donors of the project,the broad objective of Community Development is the upliftment of the target groups and villages into economically independent, socially accepted, and self-reliant communities. The Community Development programme is intended to supplement the employment and income generating activities of CNDF by undertaking the following more specific activities:

i) To provide facilities and training to improve living conditions in relation to housing, health, hygiene and nutrition.

ii) To provide and improve educational facilities, including opportunities for the acquisition of adult literacy.

iii) To provide income earning opportunities for women, youth and educationally deprived children, by the development of cottage industries, handicrafts and services, and through training in appropriate skills.

iv) To assist in the development of cooperatives, and other community and rural institutions, including women's groups.

v) To promote through programme of leadership training the ideals of self help, self reliance and social consciousness, the recognition of human rights, and the removal of traditional barriers and discriminatory practices based on caste and sex.

The development of self reliance is central to these objectives. The measure of the effectiveness of Community Development programmes is the extent and speed at which the communities they serve are able to develop leadership and institutions capable by their own efforts to secure access to benefits and services available to society in general.

4.5.2.Health and hygiene adtivities.

CEY-NOR's main contribution towards Community Development was the provision of a Health Centre where the villagers could seek treatment for minor ailments; mother and child care services too were undertaken by the centre.

Since the centre was handed over to Redd Barna in 1974 efforts have been made to improve general health conditions in the target villages by emphasizing preventive health. Health education was undertaken in the villages as well as in the schools. However, it was felt that the response to this was not very encouraging, and in 1976 the curative section of the health centre was closed down. The maternity section too was closed down since there were only about 3 - 4 deliveries per month. The villagers, however, seemed to be dissatisfied with this, as they feel it is their right to have access to such facilities both in Karainagar and in the nearby town of Kayts.

The role of the Health Centre has been even more restricted after February 1980, when it was taken over by the Government. The health education programme has been abandoned and emphasis now is on mother and children services. Polyclinics are held twice a week, while visits are made to the villages to administer the Public Health Departments vaccination programmes.

The centre continues to render a great service towards childcare. Undernourished children under 6 years of age are brought daily to the clinics to be given a balanced daily diet. At present 16 such children attend this day care centre.

The impact of the health education programme, however, does not seem very great. Statistics show there are a number of under-weight children attending the polyclinics and that vitamin A deficiency seems to be quite high amongst these children. In the absence of adequate economic advancement such education seems to be of little effect.

The Thoppukadu, Madathavalavu water scheme initiated by CEY-NOR

and the Thoppukadu R.D.S., however, has contributed towards reducing bowel disorders which were quite high in these areas. However, with the increasing population and the emergence of new housing schemes this needs extension. This problem has caused some tension between the villagers and CEY-NOR,as the former consider it the duty of the latter to provide the extension. Oori too has been provided with a water scheme which was founded by the Norwegian Housewives Association. Maintenance of these two schemes is undertaken by CEY-NOR. Although much effort has been made by the Redd Barna to induce the people to build latrines, one sees that the majority of the households in the target area has not done so.

4.5.3. Education.

Education is regarded by many of the villagers of the target areas as a means by which caste barriers could be broken down. The prevalence of this attitude could be attributed to the importance that CEY-NOR has been laying on education. CEY-NOR has provided kindergartens in Thoppukadu and Oori and Thadduvankudi and continues to pay teachers who conduct the classes. Redd Barna was running Thoppukadu Pre Schools till December 1977, when the Community Development Division of CNDF took over The teachers have been sent for training and more attention is paid in teaching the children good habits, cleanliness etc. As the primary schools in both Thoppukadu and Oori have been shortstaffed for many years, CEY-NOR had contributed by recruiting and paying for two teachers in the Oori Primary School and one in the Thoppukadu Primary School. U.N.F. (Swedish Good-templar Movement) engaged in social service activities in the target areas since 1971,also has been paying one teacher in the Thoppukadu school.

CEY-NOR has decided to withdraw their services from December 1980, as it feels that the Education Department will never appoint the necessary teachers to the schools as long as the school obtains CEY-NOR support. The schools are understaffed even with these additional teachers, and the standards are not very good. What is disturbing, however, is the high drop-out rates when it comes to secondary schooling. There is only one secondary school in Karainagar,and gaining admission to these schools

is not very easy.

Adult education is a prerequisite in villages such as the target areas, if one hopes to harness popular participation in the development process. CEY-NOR has paid little attention to this important feature. U.N.F. has drawn up a programme for all target areas. Attendence to these classes, however, is limited and seems confined mainly to women and boys under 19. This may be due to the fact that the teacher is a female. As cultural barriers seem to be a hindrance to the programme, it would be advisable if classes were conducted separately for male and females. In 1979 a series of lectures were held by University Dons and their scholars. But this was not continued as the response was low.

U.N.F. has also contributed towards the literacy campaign by providing a library and reading room in Madathavalavu.

Tuition classes in English, mathematics and science continues to be conducted by CEY-NOR in Thoppukadu, although this mainly benefits children who are already attending secondary schools. Music lessons continue to be an important aspect of the educational system, and are conducted both in Thoppukadu and Madathavalavu.

It seems unfortunate that CEY-NOR has not attempted to cooperate more effectively with the Schools Development Societies, and introduced functional literacy programmes and the institutionalized forum of discussion as suggested by Else Skjønsberg in her preliminary report of 1974. As we see education as the most important need in this area, CEY-NOR should together with U.N.F. and the Schools Development Society draw up a programme for the target areas (from pre school education to adult education). Regular meetings should be held to follow up the program.

4.5.4. Housing.

In the last two years, CEY-NOR has concentrated on providing better housing for the people in the target areas. It has been instrumental in obtaining funds from the National Housing Development Authority (NHDA) to construct houses in Thoppukadu and

Madathavalavu. A proposal has been made for such a scheme in Oori too. The nationwide Self Help Programme of the NHDA provides householder with the materials to build the house, while the cost of building the house has to be borne by them.

The land for these schemes in Thoppukadu and Oori were purchased by CEY-NOR. It has also contributed in many other ways towards these schemes such as providing transport to bring the materials to the villages, undertaking the earth filling in Madathavalavu etc. The differences in the level of assistance rendered to the two villages has caused some misunderstanding of the CEY-NOR role.

Each allottee has to spend around Rs. 2.000 - 3.000 to construct the house. CEY-NOR has provided loan facilities to those from Thoppukadu but not for those from Madathavalavu. The latter say that they have been discriminated against because of their caste and that the Development Assistant, who is a Thimilar, has favoured this people. The CEY-NOR staff, however, justify this action by saying that popular participation and response from Thoppukadu was so low that they had tried to get the villagers from Madathavalavu to be self reliant. It seems unfortunate that this principle should have been tried out with one and not the other, when there is tension already between these two groups.

The provision of these houses has not solved the housing problem in this area. Only 90 such houses have been constructed. The majority of the inhabitants continue to live in mud or cadjan houses.

4.5.5. Income-generating activities.

One of the objectives of the C.D. programme was to offer the women in the area income generating activities. So far only a Needlework and Handicraft Centre has been set up in Madathavalavu which offers training as well as income to around 26 girls in the 12-20 age group from the project area. There are 6 teachers in these centres, and all of them are from Jaffna. Thus it seems that this scheme has provided employment for women outside the target areas.

The girls who work in this centre are paid on a piece rate basis and earn around Rs. 5 - 6 per day. The CEY-NOR uniforms are stitched by these girls, they also take orders to sew garments and the clientele are mainly the CEY-NOR workers. However, production in this centre is not on an organized basis, as there is no market especially for the handicrafts and embroidery work in Karainagar. They have to depend largely on the foreign visitors for the sale of such goods.

If this centre is to become a productive unit, CEY-NOR has to find bigger market to step up production and improve the quality of the products. Efforts could be made to contact outlets such as Laksala, Lakpahana, or private handicraft centres to market their products.

Although there is a carpentary workshop and a soap industri, these seem to be run in a disorganized manner. The carpentary workshop has provided employment for two persons who are engaged in repairing CEY-NOR furniture. The soap industry has one employee, this industry partially meets the demand for soap in the villages, as well as CEY-NOR's needs.

4.5.6. Self-reliance.

A crucial goal of the community development projects has been to generate self-reliance among the target groups and communities. Development of self-reliance must basically be the result of mobilization of human and natural resources from below, and not from above. External assistance must have a catalytic effect and be limited in time. It must only be help to self-help and not in any way create new relations of dependence.

The development of self-reliance should be seen from three different angles at a time, it is conditional on material, political as well as cultural factors. Here we shall discuss to what extent these three elements have contributed to the development of self-reliance in CEY-NOR's community development activities.

Material elements.

In addition to the income-generating projects discussed above, little has been done to stimulate community-based economic

activities. With relatively limited resources, it should be possible to support the poorest fishermen to come out of the vicious circles of poverty. Interesting proposals to this respect were made both from the target groups themselves and from the CEY-NOR management. A precondition for success will often be that the assistance has a moderate pay-back arrangement built into it, so that the beneficiories are educated in economical behaviour. An indicator of low degree of self-reliance was noted when it was brought to the attention of the mission that it was most difficult to obtain contributions from the parents towards the maintenance of the schools. Instead, demands are repeatedly made for continued outside support. In order to change this, it might be a feasible contribution to cause all employees of CEY-NOR to contribute a small percentage of their earnings towards the welfare fund; and also as a rule to limit all future contributions towards welfare to be made on a matching basis, i.e. CEY-NOR contribution will be in a certain proportion to the Community's contribution. The latter need not necessarily be in cash, but may take the form of labour, skills, material etc. This has been done in the past, but must be expanded to include all future contributions towards welfare.

Of course, this is also a question of consciousness, i.e. the cultural aspects of self-reliance.

Cultural elements.

It was evident that there was insufficient appreciation of the communities' need to develop self reliance. The people and institutions in the target area, especially those from Thoppukadu, felt that the factory had been set up for their benefit, and that their economic well-being rests mainly on the continued existence of the factory. Their dependence on CEY-NOR has been greater in recent times since they feel that assistance from Government and other N.G.O.'s is not forthcoming, due to CEY-NOR patronage of these villages. Too much still continues to be expected of CEY-NOR.

Basically, the raising of the awareness of the importance of self-reliance is a question of conscientization of the people,

i.e. creation of positive attitudes towards the value of self-reliance. Of course attitudes are hard to change, but attitudinal change can only be brought about by a continuing process of "education" (education not in any formal sense but as a continuing process of dialogue). This process should be part of the consciously developed activities of the Community Development Programme. The leadership training programme which appears to be in abeyance, should be revived, because self-reliance must result through the development of the leadership process.

Political elements.

A necessary consequence of CNDF's focus on the "poorest of the poor" is the development of grass roots institutions among the target groups which will enable these groups to organize themselves into self-reliant communities. It is only through institutional development that these groups will be able increasingly to stand on their own feet, free themselves from dependence on social welfare assistance, and obtain access to the goods and services of governmental and commercial organizations. Such access has been inhibited in the past by economic and social barriers, viz poverty, ignorance and caste discrimination. An important aspect of the CEY-NOR Community Development Programme is therefore the development of self-reliant institutions of the target groups.

Many grass roots societies have been established in these areas during the last decade. The Mission, despite the limited time at its disposal, was able to meet the leadership of most of the societies listed below. The list itself is indicative of the number and scope of these societies.

Thoppukadu:	R.D. Society, Einstein Community Centre, Women's R.D. Society, Youth Sports Club.
Madathavalavu:	Valarmathy (Goodtemplar) Society, School Development Society.
Oori:	R.D. Society, Goodtemplar Youth Organization School Development Society.
Thadduvankudi:	R.D. Society, School Development Society.

In addition representatives of the Neelankadu Rural Development Society met the Mission and sought the inclusion of the Neelankadu and Palakadu villages within the scope of the Community Development Programme.

As in the case of the Trade Unions, the leadership was both articulate and reasonably appreciative of the developmental role of CEY-NOR in respect of their communities. Most of the representations made regarding further welfare needs are beyond the scope of this Mission to examine. But the encounter with the leadership enabled the Mission to assess the quality of the leadership, their perceptions of the CEY-NOR role in community development, and the state of communication between them and the local management of CEY-NOR.

The role of CEY-NOR towards these institutions has in fact been paternalistic. No effect has been made to include them in the decision making process, the community development projects have been formulated at CEY-NOR rather than emanated from the villages itself themselves.

4.5.7. Communication.

Partnership between the communities and CEY-NOR in the contribution of resources towards welfare demands frank dialogue regarding the use and accounting of the welfare monies. Representations were made to us that on occasion there was no response to requests made for information as to how grants made to welfare purposes were being utilized. Again there seems to be a certain lapse of communication between target groups and CEY-NOR which is contrary to the spirit of this project.

There has been no effective mechanism through which communication between target groups and CEY-NOR could be reached. Upto 1978 community development work was coordinated by a welfare secretary whose position and responsibility was ill defined. In 1978, however, the new community development division was set up under the administrative head of the C.D. Officer so as to systematize community development work. However, his participation and communication with the groups seems to have been both occasional

and brief. Regular meetings with the institutions were never held. Ad hoc encounters, however, took place when the institutions met the C.D.O. to make a complaint or request. A complaint by many of the R.D. societies was that although the C.D.O. had been invited to participate in meetings and other activities he seldom did so. Since mid 1980 the C.D.O. has been run by a Development Assistant as the C.D.O. has been promoted as the G.M. This has caused some apprehensions in the villages for the D.A. is from the Thimilar caste and the Pallas feel that more attention is being paid to the needs of the Thimilars. If both castes had been represented in the C.D.O., such problems may not have arisen.

4.5.8. Organization.

It is necessary that the Community Development Division is strengthened particularly in the areas of leadership training and public relations. Also the enthusiasm and motivation of the staff should be sustained by regular training seminars and evaluation sessions. Peoples organizations and groups should be trained to identify needs and develop projects with a strong self-reliance element built into them. Funds and resources should be accounted for both to donors and beneficiaries. The staff should be trained to continually focus on the ideals of social consciousness, self-reliance, self help, and the recognitions of human rights in the course of their regular dialogues and communication with the people.

A total sum of Rs. 1.385/- m has been received from various donor agencies to date for community development activities. Of this a sum of Rs. 0.995/- has been utilized. The balance sum is held in fixed deposit account. The programme for community development activities for 1981 is given in Annex IX.

The Community Development Account in the People's Bank, Jaffna, should be converted into a special fund with a Committee of Trustees consisting of representatives of donor organizations appointed by them, and representatives of the beneficiaries selected by themselves. If, as was suggested earlier, a welfare levy is deducted monthly from the wages of CEY-NOR employed for payment into the fund, a CEY-NOR employee selected by them would

be an additional trustee. The Fund's administration and accounts should be maintained separately from those of the other activities of CNDF with its own arrangements for supervision and audit. Audited accounts and auditors reports should be adequately publicised in order to evoke public confidence in the administration of the Fund.

4.6. Economic and Financial Status.

4.6.1. Balance Sheet.

The following summarized balance sheet of CNDF introduces the reader to the current financial status of the Foundation. These figures are based on the audited accounts of the financial years ended 31 March 1978 and 1979, and estimated figures for the year ended 31 March 1980.

Table 8: Balance Sheet of CNDF (Rs. million).

	1978	1979	1980 (estimated)
Fixed Assets	11.5	14.72	21.5
Current Assets			
Stock of Finished Goods	1.4	1.80	5.9
Work-in-progress	2.7	1.14	3.4
Materials		5.99	12.9
Debtors	7.6	5.21	5.8
Miscellaneous	3.0	7.02	19.6
Less			
Current Liabilities			
Creditors	6.4	2.77	3.3
Bank Loans	1.8	16.67	45.0
Other liabilities	2.0	-	-
Working Capital	4.5	1.72	-0.7
Deferred Revenue Expenditure	-	4.83	5.7
	16.0	21.27	26.5
Represented by:			
Capital Fund			
Capital Fund	14.7	19,54	27.3
Accumulated Profit/Loss	0.2	1.26	-1.3
Reserves	0.1	0.47	0.5
	16.0	21.27	26.5

Since the foundation of the enterprise the following funds have been received from Norges Godtemplar Ungdomsforbund (NGU):

		Norwegian kr.
1967	equipment for production of fibre glass boats	221,000
1968	for buildings, harbour slipway etc.	725,000
1969	ice plant etc.	270,000
	ice plant, buildings etc.	524,920
1970	acquisition of land, welfare, health centre, etc.	649,000
1971	raw material, stores building etc.	500,000
1973	fish net factory, research etc.	432,000
1974	feasibility study and construction of ferro-cement boat	175,000
	operational support	126,000
	ice plant, refitting of machines, construction of 28' boats etc.	410,000
	raw material for net production	500,000
1975	extension of ice plant, construction of 28' ferrocement boat etc.	660,000
1976	experiment with solar oven	35,000
	operational support	445,000
	construction of 2 ferrocement boats, fishing gear, compressors vehicles etc.	1,075,000
	establishment of small-scale industry	42,000
1977	training support	32,000
	construction of three 45' boats, equipment, lorries, extension of boatyard etc.	1,939,000
	5 ice machines for Kalpitiya, Mannar, Nilwella, Colombo and Kalkudah	1,482,800
	operational support	445,000
1979	operational support	2,214,000
	fish net factory, Kalpitiya	3,799,125

In addition a further sum of Rs. 1.39 million was received for the community development programme from the NGU, the Norwegian Save the Children Fund (Redd Barna), Norwegian Housewives' Association and several individual donors. (See Appendix XV.) Local contributions included Rs. 0.17 million from the Jaffna Decentralised Budget and smaller contributions from the People's Bank and the National Commercial Bank.

Funds received from other sources including the Government of Sri Lanka are as follows:

	Rs.
Decentralised budget, Matara District (for boat-yard and Ice factory) - SIDA Aid	239,971
UNF (for Matara project)	800,000
Sri Lanka Government Grant (for Fish net Factory Wennappuwa)	3,000,000
Decentralised budget, Jaffna District (for community development)	274,832
Freedom from Hunger Campaign (for Kalpitiya)	725,057
Decentralised budget, Puttalam (for Kalpitiya)	294,771
Sri Lanka Government Grant for Sail boat project	500,000
Sri Lanka Government Grant for Ice Plant, Mattakkuliya	167,000

4.6.2. The operational activities.

The figures in the Balance Sheet as per 31.3.1980 and the Profit and Loss account for the year ended at 31.3.1980 are estimated. The yearly accounts for 1979-80 are not yet closed, owing to some problems concerning sales income. According to the Finance Manager the extent of inaccuracy could amount to a sum of Rs. 100,000 - 200,000. This problem will not affect the profit and loss accounts for the different sections.

It should be noted that the profit and loss account includes both production overheads and general overheads for Karainagar and Gurunagar. The general overheads for Karainagar amounts in 1979 to Rs. 3,013,025/-, which is charged to the operating sections on the basis of the following allocations:

Boatyard section	35%
Fishing operation	15%
Processing section	15%
Fish net factory, Gurunagar	35%

The total amount of Rs. 3,013,025 included the following elements:

Bank interests	Rs. 929,000
Salaries and wages	Rs. 928,000
Depreciation	Rs. 386,000
Fuel, motor vehicles etc.	Rs. 249,000
Repairs to vehicles	Rs. 171,000
Travel & subsistence	Rs. 77,000

The profit and loss account should be studied together with the ratios of operating costs, all shown in Annex XII.

For the Karainagar Boatyard section the sales in 1979 totalled Rs. 8,430,000 which was Rs. 3,230,000 less than 1978. The prices of raw materials are still rising relatively compared with sales value. It should also be noted that the overheads in 1979 amounted to 29% of sales value of produced goods. The Net loss of the operation was Rs. 420,000 or 4% of the sales value.

The processing section had in 1979 a net profit of Rs. 140,000 and the sales more than doubled compared with 1978. The losses in the Fishing operation are dealt with in chapter 4.2.

The Fish Net Factory in Gurunagar reached a sale of Rs. 9,540,000, which is Rs. 1,160,000 more compared with 1978. Net profit is Rs. 130,000 or 2% of the sales value of produced goods. The operations are in danger of becoming increasingly unprofitable owing to the obsolescence of the machinery.

Mattakkuliya Boatyard had a profit of Rs. 803,000 on a total sales value of Rs. 5,440,000. Compared with the Karainagar Boatyard, the ratios as percentage of sales value are:

	Materials	Wages	Overheads	Net Profit
Karainagar	59	16	29	-04
Mattakkuliya	45	22	18	15

The other sections are still running in and no comparison is possible.

The total financial results of the operations in 1979 are unsatisfactory. A total loss of around Rs. 1,3 million cannot be justified. Immediate action is necessary to examine the viability of all the activities of CNDF. This matter is referred to later in this chapter.

4.6.3. The book-keeping and auditing.

The book-keeping function is allocated to the different sections of the company. The number of employees in book-keeping is as follows:

Head office in Colombo	3	persons
Karainagar	22	"
Gurunagar	4	"
Polgahamulla	3	"
Kalpitiya	-	"

The procedure and organization of the book-keeping tasks operate fairly well. The accounts are now kept in good order and entries are made regularly. It has not always been good. The auxiliary accounts for cash in hand, bank accounts, payroll and stock ledger for raw materials and finished goods are fairly well organized and maintained. Every month a financial report is prepared, giving information of profit and loss for each activity, the use of raw material, direct wages and overheads of the month. It is our conclusion that the book-keeping procedures are adequate to the need of the company. Some of the staff require more training which will enable them to take a broader view of the totality of the accounting function.

Cost Accounting.

One of the main objectives of the book-keeping activities is to prepare financial data for cost accounting. The cost accounting will show how different resources are used and utilized within the company and the cost of the output of production. The information from cost accounting can be used either to estimate the cost or value of a product before it is produced, or to show the actual cost of a product afterwards. It seems to be obvious that there has been a lack of understanding of the importance of establishing or creating information which could explain the costs of different alternatives when decisions are made.

Direct material used is recorded on requisitions for material and then recorded in a ledger for stock control and summarized in index cards for each boat. Hours used are recorded on hour-tickets and entered on the index card. This is the usual way of recording this type of information, and seems to function well. The Mission doubts, however whether the information recorded is used for control of the achievements in production departments. The index cards disclosed differences in material or direct hours used on different number of boats. These differences are not examined or investigated to ascertain the reasons for the differences. Supervisors in the production departments should examine the index cards regularly and use the information for control of operations.

The overhead costs are recorded and divided in a series of accounts. The actual figures are compared with budgeted figures, and it will be of use to the management to pay attention to the reasons for differences between budgeted and actual expenses.

Auditing.

In Karainagar the internal auditing is carried out by the internal auditors from T. Someswaran ACA in Jaffna (49, Abdul Caffoor Mawatha, Colombo 3). Chartered Accountants carry out the external auditing for the whole company. Tudor V. Perera & Co., Colombo.

4.6.4. The use of budgets.

Procedures for use of budgets are developed within the different sections of the company. The mission received the impression that

budgets are not utilized as a steering device in all respects. The budgets have two main purposes. The first one is to be a tool in the planning process. Through preparation of budgets there will be opportunity to work up different alternatives for activities and solutions to problems which can be foreseen in the year ahead. The alternatives should be delt with and discussed at different levels of management. It is important that heads of departments participate in the process of preparing the budget for the acitivities they manage. A leader who doesn's participate in this process will feel no obligation and motivation to achieve the goals set in the budget. The second purpose of the budget is to establish a yardstick for comparison of planned and actual achievements. It is important that the actual results are reported to the leaders concerned and opportunities should be given to explain and discuss why differences arise. The Mission wishes to emphasize the importance of the further development of budgeting procedures as a steering and motivating device for management of the company.

4.6.5. The report system.

At the end of each month a monthly report is made. There is no fixed pattern for this report, but it usually consists of the following two subjets:

A general financial report with a summary of operating results for the different sections and remarks and comments on the operations.

Special reports from the sections;

Boatyard
Fish net factory
Ice plant and Personnel matters.

A great deal of information is to be found in these reports, but this is not adequate to the needs of the Board of Directors. The report is too voluminous and contains a lot of detail which will be of no use for the Board of Directors. It is difficult to evaluate the results because the reports give little opportunity to compare the results with plans and budgets.

The Mission suggests the following changes:

- A model or pattern should be worked out for preparing the report to be used every month.

- The report should be prepared by the General Manager himself, i.e. he should use the reports from his subordinates when he is composing his report, not repeat the reports from his subordinates entirely.

- The report should be based on charts giving information on the evolution of operations and results over a number of previous periods and compared with plans and budgets. On each chart special comments should be made to explain extraordinary situations and why plans and budgets had not been achieved.

- When preparing the report it should be kept in mind that the members of the Board neither have sufficient background to evaluate details, nor are interested in dealing with details.

4.6.6. Expansion Programme.

The following is the present position of the expansion programme:

(1) Matara: The Fishnet Factory at Polgahamulla is in production and had sales estimated at Rs. 3.6 million during the financial year ended 31 March 1980. Land and buildings at an estimated value of Rs. 426,000 was made available by Government. Considerable alternations have still to be made to the building, particularly the construction of Stores for raw material and finished goods. Some work is in progress. A sum of Rs. 800,000 is available as a grant from UNF to meet these expenses. The total value of plant, machinery and equipment in the project is estimated at Rs. 2.5 million. There has been no contribution by Government towards the initial working capital of the Fishnet Factory.

The building of the boatyard and ice factory at Nilwella is nearing completion. The ice plant was donated in 1977 by NGU at a cost of Rs. 660,000. Aid towards the construction of the buildings,

amounting to Rs. 239,971 was made by SIDA. The estimated cost of completion of the boatyard and ice plant is as follows:

Boatyard (tools, raw material, storage and slipway)	Rs. 315,000
Ice Plant (overhead tank etc.)	Rs. 70,000
Staff facilities	Rs. 100,000
Gates, fence, etc.	Rs. 20,000
	Rs. 505,000

Application has been made to the District Ministry, Matara, for allocation of funds from the decentralized budget to enable early completion of the remaining work and commencement of production.

(2) Puttalam: The boat yard and ice factory in Kalpitiya are complete. The ice plant was donated by NGU in 1977, at a cost of Rs. 665,208. The land and buildings valued at Rs. 419,000 were financed by a grant of Rs. 294,771 from the funds of the former District Development Council. A sum of Rs. 725,000 was transferred to the project by the Freedom from Hunger Campaign and helped finance it further. The boat yard is not in production at present. The ice plant is not yet in operation since the insulation of the building is yet to be completed.

After considerable delay in the selection of a suitable site for the Fishnet Factory, it has finally been decided that it should be located in Lunuwila in the Wennappuwa electorate. The Government has paid a grant of Rs. 3 million towards the construction of the factory. Work has not yet commenced on the building. In the meantime, all the machinery valued at Rs. 11.5 million was received in 1979. Four of the machines are in operation at Wennappuwa in a building belonging to the Multi Purpose Cooperative Society. This operation is, for accounting purposes, being treated as an extension of the Gurunagar factory since the nets are being sent there for finishing.

In order to get the boatyard and ice plant working, it is necessary to supplement the present generator, which was provided by CNDF at a cost of Rs. 180,000, with an additional plant. Also there appears to be no market for the flat bottomed 17½ foot boats which the boatyard is equipped to produce. Modification of

the boat design will involve investment in a new mould. The estimated outlay necessary to rectify these deficiencies and to bring these activities into production is as follows:

Mould	Rs. 100,000
Additional Generator	Rs. 200,000
Extensions to buildings	Rs. 400,000
	Rs. 700,000

(3) Mattakkuliya: Another development is the take-over of the Mattakkuliya Boat yard in March 1979 from the Ceylon Fisheries Corporation (CFC) on the insistence of Government. The exact terms of the take-over are recorded in the letter of 29.1.1979 from the Ministry of Fisheries to CEY-NOR. The position is as follows:

i) The land and buildings belong to the Department of Industries and there is no formal arrangement for its occupation by the boatyard.

ii) CEY-NOR was expected to take over and pay for all the tools, raw materials, work in progress and finished goods found at the date of take-over. These were estimated at Rs. 2.1 million (approx.) (Rs. 500,000 has been paid up to date.) Lathes, wood working machinery, vehicles etc. still remain the property of CFC.

iii) CEY-NOR was to take over the staff and workmen.

iv) CEY-NOR had to spend an additional Rs. 275,000 on initial working capital to get the operations moving.

v) CEY-NOR was to manage the boatyard on a profit sharing basis with 50 percent of the profit going to CFC.

The boatyard is heavily dependent upon borrowed capital to finance raw material purchases.

CNDF Contribution to expansion.

From the figures and accounts we have been shown, it would appear that the Matara and Puttalam projects have thus far been financed as follows:

Matara

Plant and Machinery (UNF)	Rs. 1,374,925
Ice Plant (NGU)	Rs. 660,000
Grant for building (SIDA)	Rs. 239,971
Grant for building (UNF)	Rs. 800,000
CNDF Contribution 1978-79	Rs. 3,208,040

Puttalam

Ice Plant (NGU)	Rs. 665,208
Car (NGU)	Rs. 14,900
Freedom from Hunger Campaign	Rs. 725,057
Decentralized budget, Puttalam	Rs. 294,771
CNDF Contribution 1978-79	Rs. 1,178,977

It will be observed that in 1978-79 a sum of Rs. 4.4 million has been spent by CNDF account on the above projects. This is confirmed by the audited balance sheet of the financial year ended 31 March 1979, which is the last audited statement of accounts available. We have yet to see the balance sheet of the financial year ended 31 March 1980. The expenditure of Rs. 4.4 million was strenuously denied by the CNDF management. The statement produced to the Mission purporting to show that this sum has been repaid to CNDF is appended at Annex XI . Since the donations received must appear as debit balances in the ledger accounts, the Mission fails to see how these can possibly cancel other debit balances such as the sum of Rs. 4.4 million described in the 1978-79 balance sheet as investment on other projects. The Mission hopes that this matter will be satisfactorily clarified when the audited accounts of 1979-80 are produced. But the statement at Annex XI cannot obviously be regarded as an adequate or conclusive explanation .

4.6.7. The Working Capital Position.

Comparison of the audited balance sheet figures of 1978 and 1979 with the estimated figures of 1980 shows a serious deterioration in the financial position of CNDF during the latter period. Stocks of finished goods and raw materials together with work in progress rose from Rs. 8.9 million to Rs. 22.2 million - an increase of

nearly two and a half times the earlier level. With the volume of bank borrowings having increased from Rs. 16.7 million to Rs. 45.0 million (Rs. 46.0 million now) - also by nearly two and a half times, the estimated working capital position was negative. A more alarming financial picture is hard to imagine. The ratio of current assets to current liabilities is as follows:

1976	2.3
1977	1.4
1978	1.4
1979	1.1
1980	0.9

This extremely vulnerable situation is the result both of slow movement of sales (as is evident from the inventory of finished products which had trebled in volume during the year) and by both excessive build-up of raw material stocks and escalating prices. The position appears to have eased somewhat with the rundown of raw materials stocks in the last six months, but CNDF continues to remain on the brink of insolvency. Bank loans outstanding as on 24 November 1980 are as follows:

Table 9: CNDF Bank Loans as of 24 November 1980.

	Rs. (million)	
Peoples Bank, Foreign Branch, Colombo:		
Head Office CEY-NOR	8.7	
Karainagar	6.1	
Matara	5.2	
Mattakkuliya	6.7	
Kalpitiya	7.5	34.2
Peoples Bank, Jaffna:		
Overdraft	3.1	
Block Loan	7.7	
Overdue Interest	1.0	11.8
		46.0

Interest rates vary from 14½ percent to 30 percent, depending on the terms and on length of time overdue. On the total borrowings

the interest commitment is Rs. 600,000 per month. The loan funds are in excess of the total capital fund of CNDF. The amount of interest payable, given the present high rates, is likely to exceed whatever net profits CNDF is now able to earn - which has been estimated at not more than Rs. 200,000 per month.

The Peoples Bank (the principal creditors) has stopped further credit facilities. It has been claimed by the bank that the following commitments have to be met immediately:

Table 10: Immediate financial commitments of CNDF.

	Rs. (million)
Overdraft above the limit	1.0
Overdue Trust Receipt	5.3
Kalpitiya Machinery Temporary Trust Receipt	5.0
Kalpitiya Machinery - Bill	2.5
	13.8
Less fixed deposit to be used to settle Temporary Trust Receipt	5.7
Balance immediately payable	8.1

The total financial commitments of CNDF as at 24 November 1980 were as follows:

Table 11: Total financial commitments of CNDF, 24 November 1980.

	Rs. (million)
Bank loans as above	46.0
Advance received from Ministry of Fisheries	2.6
Advance received from Ports Authority	1.2
Known sundry creditors	2.0
E.P.F.	0.7
	52.5

Two other aspects of the working capital position merit mention - the requirements of raw materials; and the overhead expenses of the CNDF head office in Colombo.

Table 12: Working Capital Requirements, CNDF.

(Rs. million)

	Raw Materials (Monthly Requirements)	Finished goods Production (per month)	Working Capital Requirements 3 months stock of raw material & finished goods
Boatyards			
Karainagar	1.0	1.5	7.5
Mattakkuliya	0.6	0.9	4.5
Fish Net Factories			
Matara	1.6	2.3	11.7
Gurunagar	0.7	1.0	5.1
Wenappuwa	0.8	1.25	6.15
Processing			
Karainagar	0.3	0.5	2.4
			37.35

The expenses of running the head office in Colombo will amount to Rs. 1.5 million per year (approximately) made up of the following monthly expenditure:

Table 13: Head Office Expenses for month, CNDF.

Salaries and E.P.F.	Rs. 87,000
Rent	Rs. 15,000
Electricity	Rs. 1,500
Telephones	Rs. 2,000
Fuel to Vehicles	Rs. 7,500
Travelling and Subsistence	Rs. 3,000
Printing and Stationery	Rs. 2,000
Repairs to Vehicles	Rs. 2,500
Welfare	Rs. 750
Security	Rs. 750
	Rs. 122,000

4.6.8. Review.

CNDF is at present in no position to repay the loans obtained from the bank. Given the magnitude of the amounts, obviously a massive

rescue operation is undertaken. In a purely private sector organization such an operation will be undertaken by call up of unpaid share capital and/or a fresh issue of shares or debentures. In the case of public corporations such funding has usually been undertaken by the Treasury. Neither means of capatalization are available to CNDF. The amount of capital that must be raised in order to rescue CNDF can be estimated as follows:

	Rs. (million)
Bank loans	46.0
Amounts necessary to complete Matara and Puttalam projects	1.2
Other commitments	6.5
Working capital requirements for three months	37.5
Amount estimated for refitting trawlers in Karainagar	3.5
Amount estimated for rehabilitation of FNF, Gurunagar	12.0

It is possible to attribute the present financial situation to a number of factors, but principally it is due to:

- The rapid expansion resulting from the two new projects at Puttalam and Matara and the take-over of the boatyard at Mattakuliya. These seem to have been undertaken without proper feasibility examination particularly of the financial aspect and undertaken hastily without regard to the possibilities of phasing the developments over a period of time so as to ease the burden on CNDF.

- Slow down in the movement of sales as a result of import liberalization.

- The rapid escalation of the cost of imports.

- The high lending rates prevailing in the banking sector.

Measures to extricate CNDF from its present financial predicament must be based upon a consideration of its future capital structure. At present CNDF is in the incongrous position of being a private foundation financed mainly by overseas donations, but

S U M M A R Y

(Rs. million)

Project Investments		Current Commitments	
Foreign Aid			
NGU/NORAD	17.6	Bank loans	46.0
SIDA[1)]		Other commitments	6.5
UNF[1)]	0.8		
FFHC	0.73	Amount required to complete Puttalam and Matara projects	1.2
		Requirement of working capital (3 months)	37.4
CNDF			
Matara & Puttalam	4.4		
Mattakkuliya	0.5		
SRI LANKA GOVERNMENT			
Wennappuwa FNF	3.0		
Matara land and buildings	0.43		
Kalpitiya land and buildings	0.42		
Sailboat project	0.5		
Ice factory Mattakkuliya	0.17		
Community development	0.27		

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1) In addition to the figures that appear in the CNDF book-keeping, grants amounting to approximately 6,13 million Swedish kroner (25 million Rs.) have been received from UNF/SIDA.

under the de facto management of the Ministry of Fisheries. The logical development would be to bring the legal position in line with the de facto position by government acquisition of the business under the Business Acquisitions Act. In that event capital will be injected into the business by the allocation of state funds.

It is not reasonable, however, to expect donor agencies to undertake further financing of CNDF while it continues to remain under de facto government control. The Mission has set out in some detail the type of organization and management structure that is envisaged for CNDF if it were to continue to remain a private foundation financed as at present (Ch. 4.7). The object of those recommendations is to make CNDF both in practice and in law into a non-government organization working in close liason with the Ministry of Fisheries, but completely autonomous in respect of management and decision making.

The alternatives then are:

- Complete government control and governmental arrangements regarding financing, and

- effective non government status, not only in law, but in practice, accompanied by further donor financing, possibly through some kind of consortium of donor agencies.

If the latter alternative becomes possible, it will be necessary for the donor agencies to have the assurance of an effective voice in decision making including the appointment of key top executives of CNDF, and particularly over decisions involving the expansion or termination of CNDF activities. Also to enable donor agencies to decide whether, and if so, on what further terms, they should finance the undertaking, an examination of the economic viability of the acitivities of CNDF is obviously a necessary prerequisite. The Mission's mandate did not envisage detailed investigations of that nature, which must therefore form a part of the second stage of the Mission's work. The Mission recommends that NORAD should immediately set in motion the steps necessary for this purpose by engaging the services of suitable local consultants with a view

to having a complete economic viability plan available within the next two months. The urgency of the financial situation of CNDF and the need to commence negotiations regarding further donor support demands that this be done now. The terms of reference of the exercise are suggested below:

> "To examine the economic viability of the activities of CNDF and to formulate an economic viability plan for the next three years; and in particular to recommend
>
> - whether, and if so what, activities should be terminated, suspended or postponed;
>
> - whether, and if so what, activities should be continued and consolidated, and the nature scope and cost of such consolidation;
>
> - whether, and if so what, additional activities should be undertaken in order to improve the economic viability of the enterprise as a whole, and the nature, scope and cost of such additional activities;
>
> - a cash flow statement of the costs and benefits of the recommended plan;
>
> - such other measures as are necessary to improve the economic viability of CNDF."

In the meantime, while the study is being undertaken, it would be prudent to "freeze" some of the existing activities until the recommendations of the Consultants are known.
The Mission suggests that:

- The commencement of production at the Nilwella boatyard and resumption of production in the Kalpitiya boatyard should be temporarily postponed.
- The fishing and processing activities at Karainagar should be suspended.
- The fish stalls in Colombo should be temporarily closed.
- Immediate action should be taken to collect overdue debts.
- Recruitment of staff at all levels should be suspended, and
- all proposed activities that have not yet commenced should be postponed.

4.7. Organization and Management.

4.7.1 Magnitude of the Enterprise.

The magnitude of the operations of CNDF, as they now stand, can be gauged from the following data:

Table 14: Magnitude of CNDF Operations (Gross Turnover, No. of Employees).

	Gross Turnover 1979-80 (Rs. mill.)	No. of Present Employees
Head Office		56
Karainagar		
Boat-yard	Rs. 8.4	317
Processing activities	Rs. 3.5	15 permanent 80 casual
Trawler fishing	Rs. 2.6	40
Ice Plant	Rs. 0.3	15
Gurunagar Fishnet Factory	Rs. 9.5	232
Long Line Unit	Rs. 0.4	16
Ice Plant (March 1980)	-	10
Puttalam		
Kalpitiya Boat-yard	Rs. 0.09	34
Wenappuwa Fish net Factory (under construction)	-	-
Ice Plant	-	-
Matara		
Nilwella boat-yard (under construction)	-	7
-"- Iceplant -"-	-	-
Polgahamulla F.N.F. (March 1980)	-	148
Ice Plant	-	-
Colombo		
Mattakuliya boat-yard	Rs. 5,0	170
Mattakuliya Fish meal plant	-	
Ice Plant (under construction)	-	-
Retail Fish Stalls	-	25
Total turnover last financial year	Rs. 29.79	

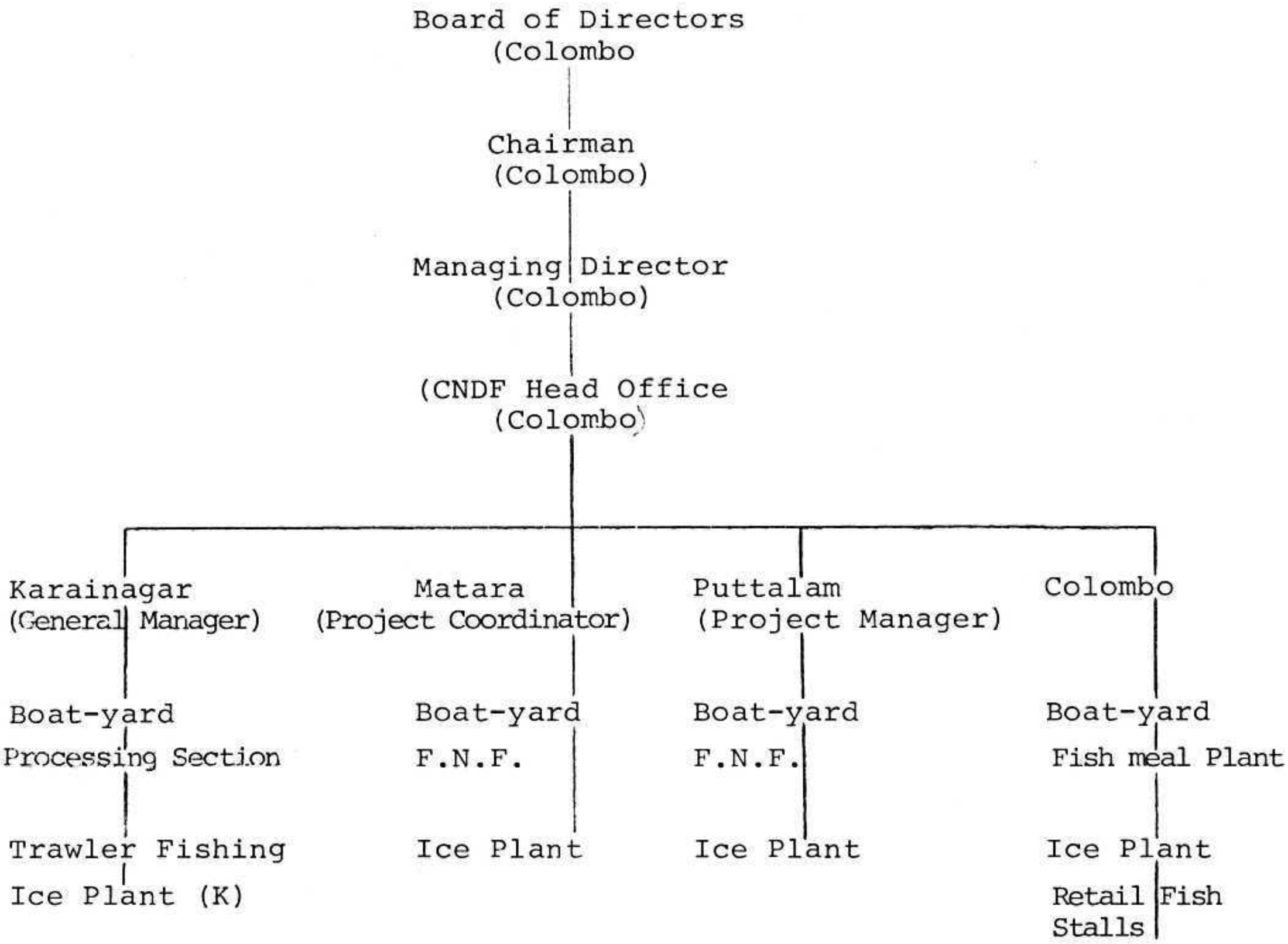
The locational spread and scale of the activities has resulted in the view being put forward by NORAD and others that CNDF has far outgrown its original intent; and that its ability to consolidate itself and stand on its own feet is open to question as a result; that is has expanded and diversified beyond its capacity.

The historical circumstances that led to the expansion of CNDF were examined at some length earlier. Both the Norwegian donors and the Sri Lanka Government would wish CNDF to maintain a Sri Lankan image and its acitivities to have a national spread.

The Mission is in sympathy with this view. But while satisfying the need for a national image, the CNDF should remain faithful to its original aim of developing small projects focussing on the needs of specific identifiable groups of disadvantaged coastal communities. It is clear that in undertaking the expansion programme, this aim was frequently lost sight of, and some of the present problems of CNDF are in no small measure, due to the failure of its directors and officials to encompass the expansion programme within the framework of its ideology and objectives. CNDF is neither a purely commercial private sector organization, nor a Government corporation, and if it remained true to its ideology, it would combine the best elements of both systems. As it is, it has grown into something significantly different from what it was originally intended to be.

4.7.2. Administrative Organization.

The present organization of CNDF and the lines of activity and communication follow the conventional unitary pattern:



Ice Plant (G)
F.N.F.
Long Line Unit

Although there is evidently a recent attempt to treat each activity as self-accounting, CNDF still remains a highly centralized organization. The tendency towards centralism is always present in organizations, and has to be guarded against. In the case of CNDF, the further factors that contributed towards the present highly centralized decision making process were referred to earlier. These were the outcome of the financial difficulties - particularly in respect of working capital - in which CNDF found itself. The Ministry of Fisheries progressively assumed de facto control of effective decision making. This process was facilitated by the fact that the Secretary, Ministry of Fisheries, is also ex-officio chairman of CNDF. The decision inspired by the Ministry have tended to focus strongly on efficiency and centralized control. The remoteness of this decision making process has bad adverse consequences, particularly for the Karainagar-Gurunagar project

(the Puttalam and Matara developments being still in an early stage are therefore in continuing need of central financial support and administrative direction). This is evident in the transfer of trained or key personnel to the other projects, the recent decision to retrench employees and the transfer of trawlers and lorries to Colombo. The immediate effect of these decisions on employment among the target groups, and the long term prospects of the Jaffna projects, either have not been adequately considered, or if considered, have not been adequately communicated to the people. We found in consequence a great deal of uncertainty and apprehension among staff and target groups, who seemed to feel that given the present direction of CNDF policies, most of the activities in the north, with the possible exception of the boat-yard, must sooner or later come to an end.

This illustrates the unfortunate aspect of such decisions; aspects which arise both because of the centralized origin of the decisions and because they are based on techno-economic considerations to the exclusion of the overall developmental objectives of the project. For an organization that has, as its main focus, the upliftment of certain identified target groups which are at present economically depressed or socially oppressed, it is essential that decisions that affect their employment and future welfare must be taken in consultation with the local interests concerned.

4.7.3. Communication between CEY-NOR and its Target Groups.

Among the problems observed therefore, is that of insufficient communication between the board and management on one hand and the programme's social environment on the other. By social environment is meant employees, the affected local communities, the users of the CEY-NOR products and services, as well as the Jaffna District and the Tamil population as such.

Employees. In a project of this nature it should at least be expected that there is a frank and continuous dialogue between leadership and employees. In one way or other, the employees should be involved in the making of decisions of vital importance to themselves.

The Mission's impression, however, is that this dialogue and participation is lacking. This impression is based on conversations with both management and the three trade unions that are organized in Karainagar/Gurunagar.The employees' common complain is that they are unable to influence decisions. They are concerned about the strong centralization that has taken place in the decision-making structure, and the geographical and social distance to the decision-centre.

Target Communities. Very much of the above description is also valid for the target communities. This is discussed in chapter 4.5. It was observed during our discussions with the various representatives of organizations of these communities, that they seem to be at least as concerned about CNDF as an organization as with the more welfare oriented projects. This is understandable considering their vital dependence on CNDF for employment and incomes.

Fishing Population. It has always been an explicit intention of CNDF to serve the interests of the local fishing population, and as discussed in chapter 5.5, this has to a large extent been achieved. We are aware of various complaints that CNDF products are not always the ones that the local fishermen demand. It has furthermore been pointed out that there is no channel through which views and interests of the fishermen can be expressed, and that CNDF in general is not receptive to complaints about its products. Improved communication with the fishing people would not only heighten their identification with CNDF, but would also have positive effects on CNDF's market share and stability.

Jaffna District in General. Against the background of the particular ethnic, linguistic and religious situation of Jaffna and CEYNOR's vital importance to the region, it is not surprising that the entire district is extremely sensitive to changes that affect the institution. Trade unions, community organizations and politicians in the district who met the Mission, seemed to perceive the more recent developments in CNDF to be ethnically based. Among complaints made were the deteriorating economy of CNDF, the Colombo based decision making, the retrenchment of workers, the replacement of some Tamil workers who had been temporarily moved to Sinhalese

areas, and the transfer of the trawler fleet from Jaffna to Colombo. Whatever the justification for these events, nevertheless there seems to have been a breakdown in communication at the political and community level. Better communication might have allayed the fear that the Jaffna project is being gradually strangled out of existence.

4.7.4. Management.

The Mission was gratified to find that the directors of CNDF themselves have had under consideration the formation of regional management committees for the different locations, and supports this initiative in principle. It is essential, however, that in constituting these committees, certain considerations, which have tended to be overlooked in the past, should be borne in mind:

- CNDF is a private foundation, not a public enterprise.

- CNDF, like every other private organization, has a duty to collaborate with Government in the achievement of national developmental goals; such collaboration would normally be achieved by a meaningful process of dialogue; direct governmental participation in management is not an essential prerequisite to such collaboration; collaboration must be distinguished from management.

- CNDF is a Sri Lankan organization, and its image and geographical spread must demonstrate its essentially national character. But because its main focus is the development of identified target groups of disadvantaged people, it is essential that their interests are secured by enabling maximum local participation in the decision making process.

- The committees should consist of persons who represent the interests of the donors; the interests of the ultimate beneficiaries; and those who have essential technical-managerial experience.

- The committees should consist of persons who have an abiding commitment to the ideology which prompted NGU and other donors to initiate and sustain this programme; it will thereby be ensured that in the management of CNDF its basic

> aims are always kept in view, and not overlooked in the pursuit solely of commercial objectives or considerations of techno-economic efficiency.

Unfortunately, in practice some of these principles seem to have been overlooked in the appointment of directors to the CNDF, and it is essential the same mistakes should not be repeated in the appointment of regional committees. From the outset NGU, in selecting Sri Lankans to fill positions on the board, preferred government officials holding particular offices such as the Government Agent, Jaffna; the Director of Fisheries; etc. This trend has continued over the years. The present board, for example, consists of two secretaries to Ministries, one of whom is the Chairman, the District Secretary, Jaffna, a former Government Agent, Jaffna, all of whom are public servants, and two others - the Managing Director who is a full time employee of the board - and Mr. Arne Fjørtoft, Chairman of the NGU Aid Committee. In preferring public officials, NGU appears to have been motived by the desire to maintain close links with the Government, particularly at a time when the project was Jaffna based and an undercurrent of disfavour about a solely Jaffna based project was evident; although there was no direct governmental intervention that arose out of it. Now that CNDF is a national institution with more activities outside of Jaffna than within, this consideration does not apply any longer. There can be little justification for CNDF to have such a large proportion of public officials as it does now. It is more important that the board should have, in the light of its now expanded role, greater representation of economic, social and technical expertise. Also it is important for the donors to ensure that CNDF remains completely free from identification with the political persuasions of the different parties that alternate in government. It is not possible to secure these aims through the appointment of public officials ex-officio. Nor can it be guaranteed that every such official will necessarily feel committed to the rather special ideology of CNDF. Persons appointed to these required committees should, therefore, in the view of the mission, satisfy the following criteria, that is to say they should be persons who have been:

- politically independent or not known publicly to be identified with any particular political persuasion;

- engaged in the development of fisheries; social or economic research relevant to the objectives of CNDF; social welfare work; etc.
- long associated with the donor agencies;
- identified with, or capable of articulating the hopes and aspirations of, the final beneficiaries of the programmes and activities of CNDF.

We have no doubt it should be possible to discover many committed Sri Lankans who satisfy these criteria, evident from the many nongovernment organizations that have been able to attract such persons.

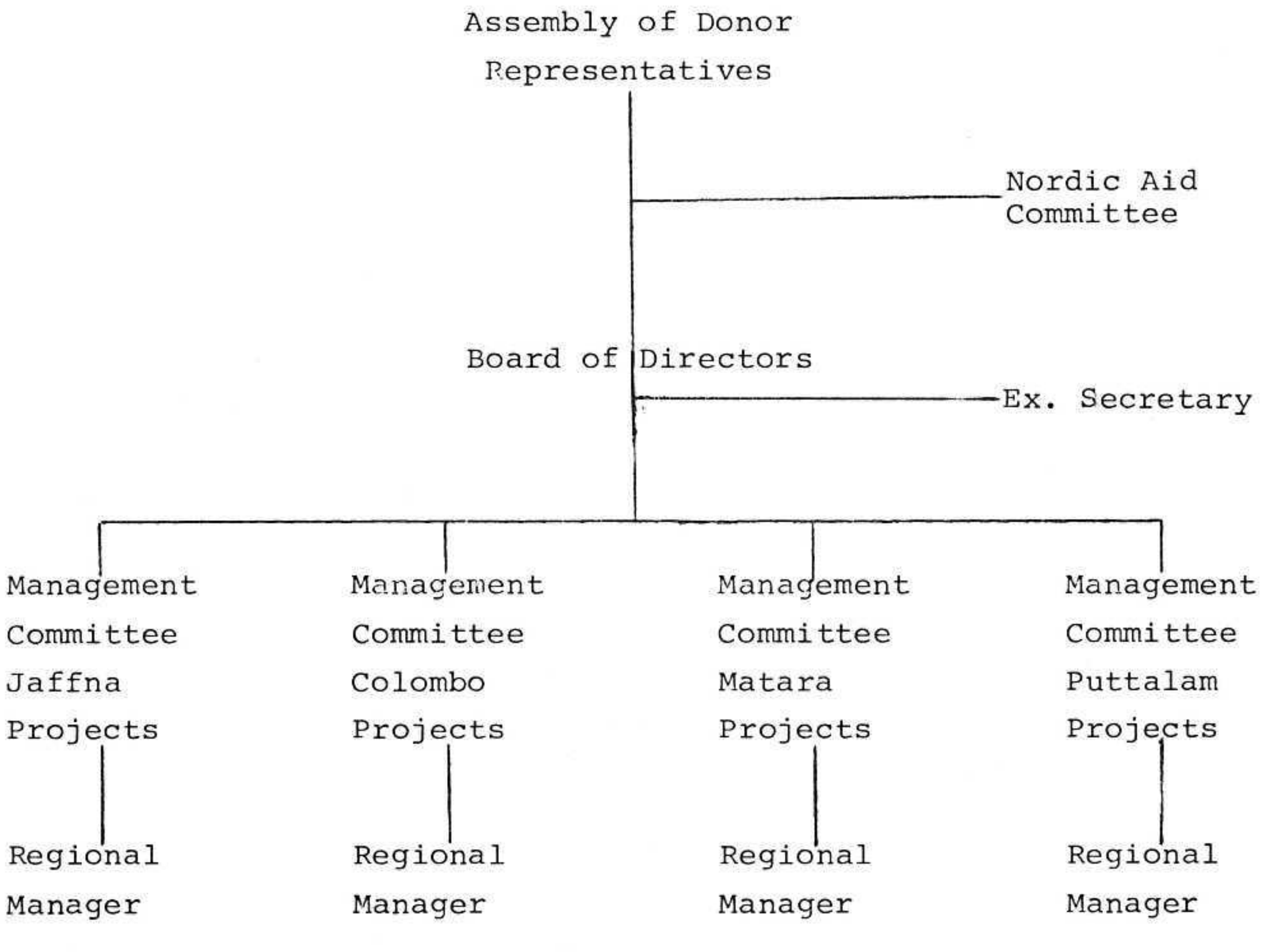
4.7.5. Proposed Organization.

The Mission's conception of the type of organization that is suitable for CNDF in future is based upon the following principles:

- In order to keep faith with the Nordic donors who raised funds for the project on the basis of certain clear expectations, and to be in a position to continue to attract such funds, CNDF should remain true to its ideology, which was defined earlier in the report.
- CNDF is now a Sri Lankan project, and all its regional divisions shold regard themselves as constituent elements of one national organization, supportive of, not in competition with, each other.
- All CNDF activities are focused upon the upliftment of certain disadvantaged groups. These activities must therefore be managed close to grass-roots level with the maximum dialogue and interaction with the immediate beneficiaries.
- While enjoying the maximum autonomy in the management of each activity, the regional committees should participate in the maintenance of a central organization for the performance of common services such as raw material imports, island-wide sales, market research, relations with donor agencies, and liaison with the Ministry of Fisheries.

- CNDF has always had, and would continue to maintain close liaison with the Ministry of Fisheries. CNDF would endeavour both to conform in its policies to the Government's broad strategy of development of the fisheries sector and to spearhead fisheries development seeking a greater focus on the problems of small fishermen and other disadvantaged coastal communities.

Diagramatically, the type or organization the Mission recommends, would be as follows:



Assembly of Donor Representatives. This will be the ultimate governing authority of CNDF and will consist of representatives of all organizations that have contributed to the development of the organization including the Government of Sri Lanka. It will meet once a year in a convenient location.

Board of Directors. A Board of Directors of not more than seven members will be appointed by the Assembly to represent:

- the Ministry of Fisheries
- the Donors
- the Target Groups
- technical expertise
- business and management expertise; and
- sociological expertise.

The Board of Directors will be Colombo based, meet monthly, and will be the principal policy making and supervisory organ of CNDF.

Secretariat.

It is recommended that the functions of the secretariat, under the supervision of the Executive Secretary of CNDF, should among other be the following:

- To convene and service periodic meetings of regional managers to ensure that regional decisions conform to the broad general policies of the board, and to resolve problems of inter-regional relations.

- To undertake coordinated purchase and supply of raw material.

- To undertake the marketing both nationally and for export of CNDF products, and to carry out market research.

- To receive, disburse and account for funds received from donor agencies and government; and to appoint Auditors.

- To monitor and report on the activities of the Regional Committees.

- To liaise with the Ministry of Fisheries on matters of common concern, including the production and sale of CNDF products.

- To undertake or provide any other common services required by the regional managers.

Management Committees.

In order to ensure that Management Committees enjoy the maximum antonomy, all functions not specifically defined as head office responsibilities should devolve upon the regions. Each region will

be self accounting and responsible for the viability of the activities. The regional committees would be appointed by the Board of Directors, after consultation with local interests, to represent:

- the relevant District Ministry
- the target groups
- business expertise, and
- technical expertise.

The fifth member of the Committee of Management will be the Regional Manager.

Community Development. It is recommended that Community Development should be organized as an independent function. The Nordic Aid Committee, consisting of representatives of the Nordic donor agencies, the Community Development Division of CNDF, and people's organizations will be jointly responsible for the execution of the Community Development Programme. The finances of the Community Development Programme will be kept distinct from those of CNDF, and these programmes will be administered independently of the other activities of CNDF.

Management Training. It is the Mission's observation that despite the rapid expansion of CNDF, no systematic management training programme has been undertaken. There are several Sri Lankan institutions whose assistance could be sought to organize such training programmes, especially tailored to suit the needs of CNDF. The Mission recommends that such a programme should be undertaken as soon as possible.

The Jaffna Project. It is but natural that the Jaffna project, by reason of their long history, constitute the main focus of attention at present while some of the other projects are still in the gestation stage. It can also be expected that some of the institutional innovations recommended in this report may be attempted first in Jaffna for that reason. Some of the additional measures that can be attempted in Jaffna are listed below:

- Establishment of a Workers Council, consisting of representatives elected by the trade unions, which comes together with the Management Committee and the officials on a regular basis (e.g. monthly) or whenever requested by one of the parties. The Workers' Council should be free to

discuss whatever matters are of interest to the workers, and make recommendations to the Management Committee.

- Establishment of a Popular Council for the target area, consisting of all the relevant organizations in the target communities. The Council will have regular meetings with the Management Committee and the officials (e.g. biannually) or whenever requested by one of the parties. The matters to be discussed and recommendations to be made will be decided by the Council itself.

5. ASSESSMENT OF OVERALL DEVELOPMENT IMPACT

5.1. Utilisation of Resources

In the absence of adequate data on resources - fixed assets, equipment, operating funds, expatriate experts and CNDF's personnel - it is not possible to evaluate the effectiveness of the utilisation of resources other than in very general terms. The available information is not accurate enough to determine which resources have been used for what activities. The information is put together in Annexes. XV-XVII .

In regard to the use of equipment and funds at the Gurunagar net factory, fishing nets have been produced successfully with second-hand machinery housed in an old building which indicates efficient utilisation of resources. Utilisation of these resources at the Karainagar boatyard, under the prevailing conditions, could also be considered reasonably efficient. In fishing, processing and marketing our impression is that equipment and funds have not been used with the same amount of effectiveness.

At Karainagar, substantial expert assistance had been obtained for boatbuilding and fishing, processing and marketing activities. The expatriate experts have from the beginning functioned not only in an advisory capacity but also as supervisors and sometimes managers. The latter role may have tended to limit the initiative of their local counterparts.

In the boatyard while the expatriate experts were specialists in GRP and ferro-cement, their skills as designers and naval architects seem never to have been questioned.This may be one of the reasons for the numerous problems that have been encountered in the various types of vessels built at this yard.
In general, the impression of the team is that the task of expatriate experts have often been quite vaguely defined, and the recruitment not always in consistance with the priority needs of the organization.

5.2. Social impact of the CNDF

The social impact of the activities of CNDF are here discussed under the following heads: employment in terms of castes, villages and sex, incomes, social integration, and the acquisition of skills.

5.2.1. Employment

Employment was not perceived as an objective per se by the founders of CNDF. As the Programme developed, however, it became quite clear that permanent employment and income opportunities would be a cornerstone for the social upliftment of the least privileged sections of the community that was desired. Gradually, therefore, creation of employment came to be identified as one of the most important objectives of CNDF. During the past thirteen years of its existence, CNDF has indeed made a substantial contribution towards providing gainful employment. As at November 1980, a total of 1165 had been employed directly at CNDF. A break-up of this under the different projects of the Foundation was tabulated earlier in the report (4.7).

To be sure when an industry such as a boat yard or net factory is to be established, a wide range of skills at the craft, supervisory, technical and managerial levels will be needed and it is not possible to find all or most of these skills from amongst the depressed communities.

However, a conscious effort must be made in the recruitment, training and career development programmes of the enterprise to give weightage to the least privileged. In evaluating the impact of the project in respect of employment, what needs to be identified is therefore the share of employment of the different target groups - castes, villages and sex.

5.2.2. Caste-wise Employment

The table below sets out a caste-wise break-down of the number of employees in the supervisory, skilled and unskilled grades at the Karainagar factory. This was the first to be established and in its immediate vicinity are to be found concentrations of some of the depressed castes.

Table 15: Number of Employees according to caste Karainagar.

Caste	Clerical	Foreman	Skilled Workers	Unskilled Workers	Total
Pallars	04	01	72	03	80
Nalavars	-	-	04	-	04
Thimilar	09	14	90	04	117
Karayar	02	02	-	-	04
Mukkayar	02	02	17	03	24
Vellalar	24	03	23	01	51
Others	07	05	39	-	51
	48	27	245	11	331

Particulars were available only in respect of 331 persons and out of these 51 have been classified as "others". However, ignoring this limitation in the coverage and taking into account the highly structured society in the

peninsula and especially in the Karainagar area, one could conclude that there is a fair mix of various castes employed at this factory and some weightage has been given to the depressed castes. Although caste consciousness appears to be still all pervasive in the peninsula, it is not something which is very much discussed in public. Even CNDF, whose primary objective is the upliftment of the depressed castes, does not compile statistics of caste-wise employment for a regular review of progress in the realisation of one of its primary objectives.

An examination of the status of the castes in the hierarchy shows that this is to a certain extent a reflection of the social hierarchy in the district. The dominance of the Thimilar caste in the supervisory and skilled grades is largely due to Thoppukadu, where there is a concentration of this caste group, being given preference for employment in the factory at its early stages. As to be expected more than 50% of the clerical posts - still considered relatively prestigious - are held by the higher caste groups. This is even more marked at the staff levels where there is virtual domination by the high castes. This is largely due to the lack of minimum educational qualifications amongst the lower caste groups. However, what is gratifying to note is that 13 out of 48 (27%) of the clerical posts are now held by the Thimilars and Pallars. With the increased educational opportunities now available, it is likely that there would be even greater mobility in the future.

5.2.3. Villages

The distribution of employment in 1980 at the Karainagar factory in respect of the target villages is tabulated below -

Table 16: Number of Employees, according to Villages, Karainagar.

	Permanent	Casual	total	%
Thoppukadu	109	14	123	29.4
Madathuwalawu	35	06	41	9.8
Oori	13	07	20	4.8
Karainagar	12	02	14	3.3
Kayts	49	06	55	13.3
Other areas	138	27	165	39.4
Total	356	62	418	100.0

From the above table it is evident that the recruitment of employees has not been restricted to Karainagar and the other three target villages. Only 47.3% of them are from these villages, 13.3% from Kayts and 39.4% from other areas. The proportions at Gurunagar are somewhat dissimilar. Out of the total number of employees at the Fishnet Factory, 77% are from the primary target areas of Gurunagar and Vaddukoddai, while 23% are from outside.

The recruitment of persons from other areas has caused much resentment among people of the target areas, since there are many youths in their areas who are unemployed. Another new dimension to the problem has been created in recent times, when recruitment of employees to the internal security division was undertaken in Colombo. Some of these employees are not only from outside the target area and district but also come from ethnic and cultural backgrounds different to that of the majority of the workers. The degree of integration/ assimilation of these recruits into the work force is difficult to assess at present. However, considering the ethnic problems prevailing in the country, it is not difficult to foresee that this may be a problem area in the future in respect of recruitement to the factories in the North and the South.

5.2.4. Employment of women

The objective of providing employment for an adequate proportion of women does not seem to have been satisfactorily achieved in Karainagar. The majority of the women who have been employed in the factory were employed on a casual basis. This is no new feature in the employment history of women of the area. The majority of the Palla women and many Thimilar women had been earlier engaged in casual agricultural work. Upto 1978,however, a large proportion of women (as many as 135) were employed as casual employees in the Processing Section which added to income generation. However, since then the numbers employed have dwindled and at present only 60 are employed on a casual basis in the processing section. The work in this section like in the agricultural sector is seasonal. The permanent cadre of females account for only 16 percent of those employed. Of these 60 percent are clerical grade employees from outside target areas and 2.7 percent are executive grade employees. The remainder are skilled and unskilled workers.

The wages of a male casual employee ranges from Rs. 12.94 to Rs. 17.94 per day (for 8 hours work). In comparison, women casual employees paid on an hourly basis earn Rs. 10.25 and their working day usually comprises of 9 hours. Many women complained that in order to earn Rs. 10.25 a day

they had sometimes to forego their lunch break. Women who were paid on a piece rate basis also earned roughly about that amount. It is only in the boat yard that male and female casual employees earned equal wages. It is important that the matter of equal pay for equal work should be given serious consideration if CNDF is to maintain its credibility in the light of its professed aim of eliminating traditional barriers to income and employment based on caste and sex. CNDF should endeavour to establish its reputation as a model employer so as to induce by its example other employers in the target environment, in which wage discrimination against women is now the norm, to adopt the equality principle. Women employees also felt discriminated against for example in respect of working conditions, provision of uniforms etc. For this they must take some blame themselves for their failure to participate more actively in the trade unions of which they are members, and through which such grievances may be articulated and redress obtained. But in a backward community such things do not happen as a matter of course. Part of the community development effort should focus on inducing women to greater participation in the institutions that have grown around them, and to emerge out of the traditional behaviour pattern which enjoins them "to leave such things to the men".

5.2.5. Incomes

The wage structure in operation at present for CNDF employees of the permanent cadre is broadly as listed below -

Grade	Monthly wage (Rs.)
Supervisory and clerical grades	450 - 725
Skilled grades	350 - 450
Unskilled grades (Statutory minimum)	292,50

In addition to these wages, allowances upto about Rs. 400/ - are also paid. This makes the wages at CNDF more attractive than government scales.

In the case of casual employees, the minimum wage is approximately Rs. 13.27 per day. This must however be seen in relation to wages available for casual employment outside of CNDF in the target areas. Most households in Thoppokadu and Madathuvalavu (other than those who depend upon CNDF for their income) depend on casual employment in the agriculture or service sectors. In Oori and Neelankadu casual employment is also found in small scale fisheries. In some instances casual employment outside CNDF is more remunerative than casual employment provided by CNDF. For example mechanics or carpenters who repair boats earn up to Rs. 50 per day, as do workers who load and unload lighters. Agricultural labourers (men) earn around Rs. 15.20 per day while women agricultural labourers who are the lowest paid earn between Rs. 8 and Rs. 10 per day. The extent of unemployment and underemployment is such however, that CNDF has had no difficulty in attracting or retaining casual employees in its various activities despite the lower casual wages it pays. This is largely due to the social prestige that employment in CNDF has come to have in the target villages, and also because casual employment is seen as the gateway to permanent employment subsequently. It is possible that the casual

employees in CNDF work many more days each year than casual employees outside (since much of casual employment is seasonal) and so a fairer comparison would be annual earnings rather than daily wages. Some assessment of this factor in future might be useful.

It has been suggested (Skjønsberg, 1974, for example) that as a result of employment provided by CNDF the levels of income and conditions of life have improved in some households who have the good fortune to have one or more CNDF employees, and that thereby a form of inequity that did not exist earlier was created. Also, the greater access of CNDF employees to the welfare benefits provided by the organisation and their greater creditworthiness among traders and money lenders as a result of the prestigious CNDF employment, tend to accentuate this unequality. There can be little doubt that this observation is true in many instances, but unfortunately the process of development does create such unequality (hopefulley only temporary). The moral, if any, is that CNDF policies should focus consciously on spreading the benefit of employment and community development as widely as possible among the target groups, and more particularly on the development of income generating activities for the benefit of those who are not CNDF employees. The establishment of benchmark statistics of the conditions of each household, and periodic monitoring thereafter on the basis of certain indentified indicators, is the only way in which this type of criticism can eventually be either proved or disproved.

An incidental side effect, as interesting as it is disturbing, is the escalation of dowries demanded by the young men in possession of prestigious jobs in CNDF.

5.2.6. Social Integration

One of the aims of the project is to eliminate traditional barriers and discrimination based on caste and to bring about the social integration of the different castes. This is not a simple or easy task. One way of accelerating this process is by bringing together in a common work-place people of different caste groups. In this respect, as would be evident from Table 15, CNDF has some achievement to its credit. This of course has its own limitations and the process if pressed too fast or carried out without imagination can become counterproductive. In this connection it may be worth noting that although the Thimilars and Pallars are both low in the caste hierarchy, the fact that the former have had the greater share of employment and other benefits has to some extent retarded the attempt to narrow the gap between these two caste groups.

Although various caste groups,from Vellalars at one end and Pallars at the other, spend most of their working life together, there is a degree of segregation between the castes in places such as the canteen. In the villages of course this is even more marked as the different castes - even Thimilars and Pallars - continue to worship at different temples and do not have much social contact with each other. It was also apparent that Vellalar community in that area kept completely aloof from CNDF and its activities.

The process of integration, however, to be complete must not only include integration of the castes of the target villages but must embrace also the wider question of integration between them and castes outside of the target area. The activities at Karainagar cannot therefore be, indeed ought not be, the

exclusive preserve of any single caste or group although preference would naturally be accorded, in recruitment promotion etc. to the target groups. In the course of dialogue between management and employees a conscious attempt should be made to remove the misconception that castes of the target area have any exclusive rights in this matter.

5.2.7. Acquisition of Skills

A grade-wise break-up of the employees at the Karainagar factory and the net factories at Gurunagar and Matara is given below:

Executive - Administrative	7
Executive - Technical	9
Supervisory	63
Clerical	56
Skilled and Semi Skilled	583
Unskilled and trainees	101
	819

During the past thirteen years, in the course of construction and operation of the boatyards, the fish processing plant, net factories and ice plants and the operation of the fishing fleet, CNDF has also brought into existence a wide spectrum of skills. Craftsmen in the building trades such as masons and carpenters, in the engineering trades such as fitters, welders, mechanics, electricians etc., supervisors and technicians, engineers and managers - all of whom have been trained at CNDF and have gained experience in their respective fields, represent a more valuable and enduring asset than the other more impressive assets of CNDF.

There appears to have been no systematic programme of apprenticeship training; the entire training of skilled workers had largely been on-the-job or on ad hoc basis first, under the guidance of expatriate personnel and later under CNDF's own trained workers and supervisors. There was also no organised training programme for the other higher grades of employees viz. supervisors, technicians, and administrative grades. As a result while a group of workers with the required level of skills are now available within CNDF, supervisory and managerial capability is somewhat limited. The present practice of automatic promotions from lower to higher grades and from skilled to supervisory grades has aggravated this situation. What needs to be done as an urgent measure is the development and implementation of a systematic programme of development and implementation of a systematic programme of training at all levels.

5.2.8. Conclusion

CNDF's contribution, in providing a measure of modest but secure employment in Karainagar, has had both negative and positive impact. Some of the positive benefits are employment, income and skills by a considerable work force relative to what was in existence before CNDF. The first steps have been taken in the integration of different castes, by bringing them together in one institution, one work place etc. Many peoples' organisations including trade unions have been formed and a certain social consciousness developed. The community development programme has improved facilities for children's health, care and education, adult literacy, housing, drinking water etc. In general what was then a neglected, impoverished, looked-down-upon section of the district has received attention and recognition, and its people have acquired some hope and expectancy.

On the other hand, some of the negative impacts are the cause of anxiety and apprehension among the employees and the people. As long as CNDF was expanding its activities and providing employment opportunities there was gen eral satisfaction. But the severe financial strain on CNDF caused by the events described elsewhere in the report, meant that in the last two years expansion had ceased and there was curtailment of expenses and lay-off of staff. The rising expectations occasioned by the project and the increasing demand for employment from the youth, now more literate and more conscious of the wider opportunities for the acquisition of skills and more prestigious employment, have coincided with a period of stagnation followed by decline on the part of CNDF-activities. The Mission found that a great deal of the representations made to it by the people and employees were directly related to the retrenchment of employees or revolved around it. Popularly this was perceived to be the result of the expansion programme undertaken by CNDF elsewhere in Sri Lanka. This feeling was summed up in the expression often heard by the Mission: "by all means let them develop the new projects, but let it not be at the expense of projects that have already been developed".

It is easy enough to belittle the achievements of CNDF and to magnify the shortcomings and the current problems. It is much more difficult to appreciate the magnitude and significance of the achievements, and the courage and perseverance of those pioneers who helped build up CNDF from its modets beginnings. It would indeed be a tragddy if the promising groundwork already achieved cannot be built upon for the reason that CNDF has been overtaken by events beyong its control and thus abandoned.

5.3. Impact on the Fishery Section in Jaffna

5.3.1.Total output of goods and services

The fishery activity, which is one of CNDF's principal activities, has the following subsidiary activities:-

i) the boatyard at Karainagar, whith its GRP and ferrocement output;

ii) the net factories, particularly the Gurunagar factory;

iii) the two ice plants at Karainagar and Gurunagar;

iv) the fishing fleet, and

v) the fish processing and marketing unit.

Other resources available are:

- local personnel trained as specialists within a number of fields;
- expatriate personnel with technical and administrative abilities within the chosen field of operation.

CNDF's external commitments have been to fullfil its obligations through:

i) supply of goods like boats, nets, ice and fish for consumption;

ii) contribution of services such as training opportunities, markets for shrimps and a number of welfare services.

5.3.2. Goods: Boats, nets and ice.

Primary effects of boat production could be summarized as follows+:

i) 150, 28 ft and about 1000 17½ ft++ vessels from the yard are in operation;

ii) employment for about 4500 fishermen and about 800 post harvest workers engaged in processing distribution; etc.

iii) harvesting of 10.000 to 12.000 tons of fish and shrimps representing a value of 80 - 100 million rupees annually.

In addition to these are the secondary effects of this technological injection. There has been a clear demonstration of the catalytic effect investment and assistance may have when directed to the right target areas. Arguments may be raised as to what extent CNDF did something which could not have been done by others. But the main fact still remains unchallenged that CNDF proved its ability to fullfill its obligations in this field. It must be mentioned, however, that the GRP boats, both the 28 and 17½ ft, are facing considerable quality complaints, problems that have come mainly as a result of poor market relations. This remains an important task for the future.

The positive effects of the net production are not as easy to quantify but still they are substantial.

Net production started in a situation where nets were

+ estimates based on Sri Lanka Fisheries Statistics, Jaffna District, 1979.

++ the total outpot of 17½ ft vessels is 1300.

very difficult to obtain in the local market - if they were available at all. Quality drawbacks mainly due to inferior equipment should be noted, but may be corrected by proper action in the future. Improved market relations are vital.

Ice supply from the plants at Karainagar and Gurunagar plays an important role in the fishery sector, particularly in the struggle to lower the depressing figure of 30% post harvest fish protein losses in Sri Lanka.

The introduction of ice is a long process which at present is in its beginning. Nevertheless it should be stated that ice certainly represents the most rational way of preserving fish for local consumption in Sri Lanka and that this development should have all possible support, although some technical alterations are necessary (see 4.4 - ice production).

5.3.3. Services

In accordance with the initial aims to provide training parallel to the introduction of new technology, training courses were commenced and in 1969 and 1970 two subsequent courses were carried out in fishery/navigation and marine engineering. Thereafter this formal training came to a standstill. Training undertaken later was on the job training and of a purely practical nature.

Such training has not had any impact on the fisheries sector of Jaffna in general because the training was provided purely for CNDF personnel. These employees have tended to stay in their jobs.

The demand for personnel trained in the practical way is great, especially within the engineering fields of the sector.

The service rendered in the form of a purchasing market for shrimps must be considered to have had a positive effect on those groups that benefitted from it. The direct benefits in the form of a market in a difficult period is obvious. The secondary effect of this service is difficult to measure. Today this service from CNDF is negligible. At best it represents a potential competition threat to the present merchants.

5.3.4 Social Distribution of Programme benefits

It is obvious that creation of more social equity among the different social classes of the project area was an important initial aim. The small scale fishery development strategy chosen, where the poorest groups should have special attention, was in the spirit of this objective.

Doubtless, CNDF has made great efforts in this area, especially in the initial stages. The establishment of shrimp sales opportunities is a clear example of the important place given to the antipoverty struggle.

However, as stated before, this work faced considerable constraints, of a financial as well as of a social and political nature. Social scientists have repeatedly pointed out specific reasons for the problems (Bibin, 1971; Klaussen, 1973; and Skjønsberg, 1975) but the project does not seem to have been able to comply with the recommendations given. Instead of a conscious target group strategy, the programmes have tended to an open offer nature, where the beneficiaries were those financially and socially capable of acquiring the products. Even though the products, for instance the 17½ ft vessel, aimed at low class fishermer , it was not sufficiently understood that even this small vessel had a capital demand of a magnitude which was beyond the means of the least well-off fishermen. The more recent 28 ft boat programme is a further step away from an antipoverty strategy, since the owners of such vessels usually belong to the top social level of the society and seldom do practical fishing themselves. Since the nets produced are dependent on vessels for their use, net production also contribute to a strategy which has departed from the small fishermen support. This does not underestimate the value of the boat and net programmes, it simply points at a biased distribution of the impacts from them. Neither does it underestimate the positive impact of the welfare programmes on the least well-off groups. It is important, however, within a future strategy to implement a more concentrated and dedicated attitute to these problems. A basic understanding of the fact that the poorest groups are never lifted out of their poverty by the better off classes but need specific direct support should govern this strategy.

5.4. Nourishment impact

The nourishment impacts of the programme are at least of three kinds:

- the impact caused by fish from CNDF catches marketed in Jaffna district;

- the more indirect impact due to improved catches from CNDF made vessels and nets; and

- decrease in post harvest losses related to CNDF ice production.

Although improvement of nutritional standards was a high-ranking objective in the initial stages of the programme, it has never received much attention as a distinctive task. Consequently the direct nourishment impact within Jaffna District from CNDF fishing and processing activities has been negligible. This is primarily due to much of the products being marketed outside the district,particularly Colombo. The subsidized sales at Karainagar were for CNDF personnel only, and thus had very limited effects. The difficulties in evaluation of the effects of certain activities within this field, may also have been a reason for lack of direct engagement in the problem. The indirect impact through the catches from CNDF made vessels and nets has to be recognized to its full extent although that is also difficult to quantify.

The ice production may not have had the nutritional impacts expected. This is mainly due to a certain resistence to iced fish; it is said that "it doesn't taste like fresh fish". But the future importance of ice for preservation purposes is obvious and its positive effects will be recognized in the future. At present ice is mainly used for items exported out of the district.

Nourishment improvements at district level, especially the distribution to vulnerable groups, remain a public sector task. The best a private sector enterprise like CNDF can do is to contribute to the official programmes in a positive way.

Ambitious marketing projects with much technical know how involved are of doubtful value in a long term perspective and should not be recommended.

A market where prices are determined by supply and demand, and where the suppliers are small and unable to influence prices, is of course not the best solution from a welfare or distribution point of view. But experience shows that it represents the most stable and viable solution to the marketing problem in a long term perspective. The fluctuation of prices due to excess or lack of supply shows that a quantity increase is the most efficient future protein supply strategy. Distribution imbalances must, as already stated, be corrected on a political level.

5.5. The effectiveness of the Programme Vs. the Fisheries sector in Jaffna

The effectiveness of a technically oriented development programme as this will be measurable by its degree of acceptance and replication. This is especially the case within small scale fisheries development where society as such is intimately involved in the process. Such acceptance and its subsequent replication is dependent on a set of conditions: -

- that the technology represents a financially rational solution;

- that the technology can be operated in terms of ability and infrastructure and that it does not interfere with social structures or patterns in an unacceptable way.

The best guarantee for fulfillment of these conditions is a target group participation strategy, not only in operation but also during the construction phase. Although this is a necessary, but not an indispensable prerequisite, causes of success or failure may to a great extent be found here. Since this programme as stated earlier (4.5) has in some respects tended to be of a paternalistic nature, and this attitude has been strengthened recently, there is reason to believe that a cooperative strategy may have been more successful. It is, however, very difficult to quantify success or failure due to the particular implementation strategy chosen. Absence of proper relations between CNDF and other fisheries societies (i.e. market relations) indicate that the replication effects within these societies are rather small.

As may be clearly perceived, the three conditions above within certain areas of activity have had adverse effects on the implementation. The poor results from the 45 ft vessels as well as of the shrimp processing may be related to these conditions.

On the success side, for instance the high degree of acceptance of boats and gear made by CNDF, one may especially point out at the time factor: the right solutions came at the right time. The 17½ ft boats as well as net production came in a period when the demand for alternatives and new solutions were pressing.

Within development of fishing as such the question of financial rationality often turns out to be a trouble spot.
The reason is that choice of technology is a very delicate problem in fisheries; more so than in most other industries.
Efficient technology developed in areas with high fish density and corresponding revenue is often transferred unaltered to a developing area where conditions are very different.
In this way the technology, instead of contributing to higher efficiency, may become financially inefficient and unacceptable as a development strategy.

This is not a typical feature in CNDF, but it is clear that choice of methods for fishing has taken place before fish availability and revenue opportunities was sufficiently clarified.
At least some of the reasons for the low financial efficiency of the 45 ft. vessels may be attributable to the insufficient financial rationality of the technology chosen.

Both infrastructure and operative conditions are critical features in a development strategy. They are interrelated in the way that they together represent the ability of the society to operate a given technology. Within the operations of the 45 ft. vessels, the availability of proper marine equipment has been a serious constraint that may be classified under this point.
The same is the case for preventive maintenance service for engines of these vessels.

In the processing section, electricity and water supply as well as availability of spareparts have been difficult. Appreciation of required hygiene standards must also be mentioned. Boat and net production have also faced constraints in this field, but they have not had severe effects. Supply of imported raw material have been difficult at times.

Interference with social structures may be more difficult to identify without closer investigation of the social patterns, but it must be accepted that this is a very important field of evaluation which should be clarified much more than this mission is able to do with its limited time and manpower available. (reference is made to ch. 4.5, 5.2 and 5.3).

The conclusions of the effectiveness of the different CNDF activities towards the fisheries sector in Jaffna District may be stated in this way:

Fishing: Low degree of replication of the 45 ft. vessels due to:

i) High cost of the vessels.
ii) Lack of qualified personnel to operate them.
iii) No maintenance service available.
iv) Operation has not shown acceptable profitability.

The smaller vessels' operation is done with methods that are accepted and now in ordinary use, especially gillnets. To which degree CNDF showed way in this field is not clear, since others also were involved in the transition process, but to the extent it did, that was because conditions i) to iii) were not violated.

Processing: There has never been an objective of CNDF that its processing activities should be copied in Jaffna District; the main aims were as we know others. Nevertheless, in spite of the fact that there have been established several shrimps processing facilities in Sri Lanka, and Jaffna is the main shrimp processing area, none of them was established in that district. The most rational solution financially seems to have been establishment in Colombo. This was discussed in chapter 4.4.

Boatbuilding has been met with a high degree of acceptance, but it seems that the 17½ ft. program has been more effective than the 28 ft. program will be, while the ferrocement vessels have been the least accepted. Both conditions i) and ii), may be also iii) can contribute to the explanation of this difference in acceptability.

Netmanufacturing is probably the best example of correct fulfillment of the conditions stated above. The development opportunity offered through the net production is a very good example of a small-step but highly effective change of conditions, in this case for the fisheries.

It must, however, be mentioned that this judgement of effectiveness is valid for the past. Which strategy will be the most effective in the future remains to determine fully. CNDF with its diversity in development strategies towards the fisheries sector represents a valuable experience within this field. In future project planning, where the question of effectiveness towards targets will have to be more strongly focused, this experience should represent a valuable asset.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Sectoral conclusions and recommendations

6.1.1. Boatbuilding.

Over the past thirteen years of its existence, CNDF has sucessfully created the necessary skills and capasity for building small boats and fishing vessels. The large number of 17½ ft. GRP boats (1300) and the 28 ft. GRP boats (150) built by the Karainagar yard has played a significant role in the fishing operations both in the Jaffna District and the rest of Sri Lanka. However, CNDF's boatyards are now faced with two problems. One, increasing competition from rival boatyards and two, inability so far to produce a small boat at a price within the reach of poor fishermen.

i) a copy in GRP of a traditional outrigger canoe has recently been made. This should be followd by further development work as necessary so that ultimately a small boat at a price within reach of the small fishermen becomes a reality;

ii) in order to be in a competitive position vis a vis the other boatyards in the private sector in the country, CNDF, should:

- take a hard look at the Nilwella and Kalpitiya boatyards and wind up their operations if CNDF's overall boat building actitity is found to be more profitable with the operation of only Karainagar and Mattakkuliya:

- explore the possibility of exports:

- improve the overall performance of the boatyards

...

iii) The following messures need to be taken to improve the performance of CNDF's boatyards:

GRP should be used for boats below 30 ft. in lenght.
Boats of 28 - 35 ft. in lenght in small series should use a combination of ferrosement, GRP and wood.
For one-off and small series production of larger vessels ferrocement should be the first choice.

The stiffening system and other structural details on the 28 ft. GRP boat should be critically examined on order to save labour. Consultant should be hired to develop proposals (Approx. 2 weeks work).
Systems, components, material and workmanship must be greatly improved in respect of machinery, electrical supply and equipment for handling of fishing gear. Recruitment and training of mechanics, electricions and other key personnel should be carefully looked after.

In order to have ferrosement accepted as a boatbuilding material in Sri Lanka an information and PR campaign should be launched. Strengthening of the keel and bottom structure should also be done in order to gain acceptance for ferrocement.
Less labour intensive methods for tying of mesh reinforcement have been developed elsewhere and this should be taken into account when the next ferrosement boat is built.
The possibility for introducing a ferrocemnet vessel of design similar to the wooden boats in operation in the Jaffna area should be investigated.

In all vessels a high ratio reduction gear between engine and propeller should be used to save fuel. For trawlers propellers designed for trawling operation should be selected.
On the larger trawlers the profitability of using a propeller duct should be investigated (saving of 25% fuel possible).

...

The possibility of using sail on different types and sizes of boats should be carefully considered. A consultant should be hired to calculate sail and rigging before prototype construction and testing is undertaken.

If the Karainagar boatyard is to carry out hull repairs on boats larger than 40 ft., a new slipway or similar arrangement is necessary.

Better equipment, better facilities and training of personnel are needed if CNDF shall act as a service yard for the fishing fleet in the Jaffna area.
The local staff should be trained to do preliminary product development work and when projects are identified, qualified consultants could be hired to work together with the local staff.

A consultant (or consultants) should be hired to go through the GRP boat production to propose appropriate action to be taken for improved efficiency and quality. (Travel expenses and approx 2 months work).

To be able to build boats at a profit an agreement which takes into account rising costs of material and labour, must be reached between the boatbuilders and the Ministry of Fisheries.

Marketing and sales promotion should be improved. The management of the boatyard should frequently make up-to-date assessment of demand for fishing vessels in Sri Lanka independently.

CNDF's engagement as a gear manufacturer and fishing fleet could be utilized together with a good knowledge of the boat market to obtain a leading position as boatbuilder in Sri Lanka.

...

The appointment by CNDF of a Fishery Extension Officer is recommended. His responsibility would be to establish an intimate and frank dialogue with the fishing population in Jaffna, register their wishes, demands and complaints and promote products and services. He should pay regular visits to the most important fishing communities in the District. This officer should be recruited from and have the confidence of the fishing population in Jaffna. In addition to having adequate knowledge of boat builing and fisheries, he should have extensive experience of marketing in the fisheries sector.

6.1.2. Fishing gear production

The Gurunagar net factory, on account of the shortcomings in the machinery installed, could not produce fishing nets in quality and price comparable with imported nets. Profits from operations were in some measures due to protection afforded by the Government for this Industry. With the liberalisation of imports and the consequent unrestricted import of nets into the country, the Gurunagar factory is facing severe competition. In an open market even the other two units in South and West, would find it difficult to compete with imports form large-scale, efficient units outside the country. It is unlikely therefore, that the factories will run at a profit if they are not competitive in the export market. One solution to this problem lies in the consolidation of all three net factories and some measures of protection againts imports.

In order to consolidate the operations of the net factories, CNDF should:

i) Carry out a detailed market survey for fishing nets in Sri Lanka and up-date it regularly. This would involve a review of the earlier FAO Survey (1978), Master Plan of the Fisheries Ministry, field investigations, analysis of import statistics and co-relation with boat building and fishing activities;

...

ii) Make a detailed assessment of the existing production capacities of the three units of CNDF and the other Government owned enterprises as well as any other units likely to be established in the near future;

iii) Based on the demand forecast and existing capacities, determine the balancing equipment that needs to be installed for maximising CNDF market share of fishing nets in Sri Lanka and for exploiting any export potential;

iv) Install the necessary balancing equipment, as a first priority at the Gurunagar factory, to enable a quality product to be manufactured at this factory at least cost;

v) Engage the services of a firm of consultants to review the organisation and management of these units in the production, personal, finance and marketing areas and implement a re-organisation programme together with a training programme for the supervisory and management personnel.

vi) Periodically review the market for alternative opportunities such as mounting gil nets, trawl nets and long lines and for the manufacture of complementary elements such as floats sinkers and markers and those fishing nets, which on account of their configuration cannot be machine made, and organise the manufacture of such nets on a cottage industry basis with Cey-Nor supplying the raw materials, training of the workers ensuring quality, carrying out certain operations that need sophisticated machinery and controls and in marketing the finished products.

vii) Aim at leadership in fishing technology by developing our integrated concept on utilisation of fishing gear and boats in optimum resource utilization and endeavour to provide the customers a better service in terms of not only price and quality but also technology.

6.1.3. Fishing Operation

Impact on CNDF Internal Development

The general impression of fishing operation in the Karainagar project is one of failure. However, this does not apply to its impact on society which is discussed elsewhere in the Report. At the same time this operation has contributed to a progressive accumulation of experience within CNDF in fishing, net-making, boat-building and in processing and marketing.

Although substantial harvests were assured from fishing operations the venture was unprofitable. Fish sales at Karainagar was popular and there was deep resentment when there were occasional interruptions. Sales to CNDF were subsidised.

Community Impact

One of the positive impacts of the fishing programme on the local community has been employment and income for nearly 60 families. At certain periodes food supplies had also been augmented for an even greater number.

The CNDF programme had transformed the project area from a backward village to an industrial township and this has in turn generated a sense of pride and self confidence among the local inhabitants. This is further reinforced by their mastery of the new fishing technology.

The fishing operation has generally been costly and available financial reserves have been virtually exhausted. If this operation is to succeed a major effort is needed immediately in terms of technology, financial resources and skills.

Alternative Utilisation of Fleet

To allow the fishing operation to continue in its present form would spell ruin not only to this unit of CNDF but also to the community dependent om this enterprise. Consolidation of the

...

fishing operation would require refitting of all the vessels with a complete re-organisation of the fleet and the operation as such where some of the vessels are sold or written off. Refitting should be based on detailed cost estimates and be under strict supervision preferably under qualified expatriate personnel;

There are two choices open for the selection of the basis for resumption of fishing operations:

i) To ascertain the viability of a permanent fishing operation;

ii) To operate the boats as permanent test-fishing vessels.

If it is decided to proceed with the first alternative, adequate funds should be made available for a minimum test period of one year. Thereafter fishing operations could be conducted during the seasons experimentally determined as the most appropriate.

The test fishing should inter alia include:

- shrimp trawling
- bottom nets amd longlines in continental slope
- light fishing for sardines with purse seine.

  (Several small light vessels with petromax lamps should be used. They should slowly gather before they are encircled by the seining vessel).

- driftnet fishing with loose nets for seer and other pelagic species. (The nets should not be attached to the vessel).

Each test should last one to two months under strict cost control to ensure the eventual continuation of this type of operation. The viability study should include a cost estimate for this operation.

If alternative (ii) is chosen, it must be understood that this operation will not be self-financing. It will depend on specific

...

project funding for its operation. Such could be channelled through the FAO/SIDA Bay of Bengal Programme for development of small-scale fisheries. This would be a natural continuation of the work done by R/V "Dr. Firdtjof Nansen". The operation should draw cn professional support from the institutions involved in that research programme. It would be preferable to combine alternatives one and two.

On the basis of information gathered through test fishing operations, its technical and economic viability must be demonstrated to the fisheries sector preferably by vessels in normal operation.

Possible technology shifts due to cost alterations

Rising fuel costs have in many part of the world, especially in developing countries where excess labour is available, raised the possibility of introduction of sails even on bigger fishing vessels. Tests are now in preparatory stages in many places. If such sail-and motor-driven operations prove competitive, a considerable alteration in boats design must take place. This is also the case for CNDF vessels.

This situation should be watched carefully so as to avoid that the fishing operation once again runs into difficulties due to lack of awareness of major developments in the industry.

6.1.4. Fish processing, marketing and consumption

In the Mission's opinion this is the area that is least viable. With the slump in the price of shrimps in 1975, the prospect for this activity, was largely reduced. But there is still a need for a certain handling capacity if the fishing operation continues.

If the shrimp activity is terminated,the problem of finding alternative employment, preferably permanent, for the 80 female workers will arise. The mission proposes the following alternatives:

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- Mounting of gill and trawl nets for sale
- Building of large mesh nets by hand.

However, these will have to be looked into more thoroughly and other solutions should also be considered.
The possibility exists for a semi-processing operation as sorting and deheading on contract with Colombo exporters during the season. This would allow a certain processing to take place and to continue some of the social objectives (high raw material price level and employment). Simultaneously all the stress and risk factors would be removed; these are:

the need for a large working capital;

the problems caused by technical faults as the shrimps are expected to be shipped to Colombo iced in fresh condition;

the risk of claims by foreign importers, for instance for hygenic reasons.

If the marketing activities are to continue which in turn depends largely on the decision regarding the fishing operation, it should be strengthened in the Jaffna District. Expensive items should be sold in the luxury market in Colombo where a substantial price discrimination policy would be possible.

Funds earned on any sales profits on luxury items could be used for reducing prices on items sold to undernourished rural areas in the Jaffna District and elsewhere.

It is evident that the extent to which this may be done is limited but a condition for establishment of such a policy is that the tools, i.e. a marketing apparatus extended in that direction - towards undernourished areas - exists. If the apparatus is available this policy may be implemented, whenever the conditions are suitable.

...

The small bottom-dwelling silverbellis (varalla sambol), which is an important by-catch in shrimp trawling could represent a possible resource for future processing activity. Since the Institute of Fish Technology in Colombo at present has a project on silverbellies utilization, CNDF itself should not commence product development but rely in the research work done there. A future processing of silverbellies for human consumption by CNDF is possible.

6.1.5. Community development and self reliance

There is little doubt that the social objectives of the originators of the project as regards community development have been fulfilled to a certain degree in the target villages of Karainagar. In the case of Gurunagar, however, except for providing employment in the net factory no social welfare work has been carried out by CNDF in the villages. Although CNDF has not been directly involved in implementing some of the activities such as the health and the educational activities, it was responsible for initiating these. This has helped considerably in improving the health and sanitation, increase awareness of the importance of education and the similar benefits. Much of the credit should go to Redd Barna and UNF for the sucess achieved here.

Since the Community Development Division was set up in 1978 CNDF has played a more meaningful role in community work.
Efforts have been made to improve educational and housing standards in the villages. It has however not succeeded in stimulating viable income generating activities for women and youth.

During 13 years of external assistance, and in spite of many difficulties and shortcommings, a unique basis has been created for a positive development in the Karainagar communities in Jaffna.

...

May be the most basic shortcoming has been the failure to move decisively in the direction towards self-reliance for these communities. Concerted efforts to achieve this should be given much more attention in the future, in order for the donor organizations to make themselves superfluous within a limited period of time,say two-three years. The following recommendations are made with this aim in mind:

i) The community development projects are to be considered independent of CNDF's industrial activities. The voluntary donor organizations like NGU, UNF, Redd Barna, Norwegian Housewives' Organization and others, are recommended to coordinate their efforts and their applications to government agencies through forming a common Nordic aid committee.

ii) Before deciding on a final programme in this field, a thorough investigation should be carried out to indentify the most adequate economic, educational and organizational set up for the achievement of popular participation and self-reliance. A special contribution from research funds should be made available for this purpose. A research team - preferably of Sri Lankans with knowledge of the target area, self-reliance projects and small-scale fisheries should be entrusted with the formulation of an action programme. The action programme, which will be worked out in close collabotation with the popular organizations in the target area and the donors should at the latest be ready by mid 1981. The popular organizations, the CNDF Community Development Division and the external donors will have joint responsibility for the carrying out of the programme, with the latter gradually pulling themselves out.

...

6.2. The financial situation

The seriousness of the financial situation of CNDF calls for immediate measures:

- to build up the capital structure of the enterprice by the provision of additional equity capital; and

- to make provision for adequate working capital by liquidating outstanding bank loans. This may take the form of a loan on concessionary terms.

In order to induce donors to participate in the above measures, there has to be a basic change in the management of CNDF. At present it is in the incongruous position of being a private foundation financed mainly by overseas donations, but for all practical purposes under the management of the Ministry of Fisheries where all effective decisions are made. It is not reasonable to assume that donors will be prepared to provide capital donations or loans of the magnitude requires (Rs. 50 million to Rs. 75 million) without assuring themselves that they will have an effective voice in the decision-making process. In particular they would wish to be in a position to influence:

- appointments of directors and chief executive;

- undertaking of new activities, termination of existing activities and similar;

- level of borrowings and other liabilities.

The mission is unable to see how these conditions can be assured with the composition and management of CNDF remaining in its present position. The mission considers that an acceptable form of management that will ensure that CNDF becomes both in form and substance a truly non-government organization (NGO) is an

...

essential prerequisite for substential donor assistance and had made appropriate recommendations in the section dealing with future organization and management.

A further issue is that of the economic viability of CNDF. In order to secure donor assistance it is necessary to have an enconmic viability plan for the next few years whereby donor agencies can satisfy themselves that it is worthwhile injecting further funds into CNDF in preference of using such funds to finance other, more viable projects. It is recommended that immediate action is taken to have such a plan prepared by suitable consultants.

If the proposal that CNDF should transform itself into a truly autonomous NGO with effective decision making authority is not found acceptable for any reason, then the Mission cannot see how it can recommend continued donor assistance to CNDF for its industrial and commercial activities. The Mission recommends, however, that every endeavour be made to find ways and means of continuing assistance towards the community development activities of CNDF, independent of the outcome of the other issues discussed above.

6.3. Proposed Organisation and Management

It was stated earlier that an essential condition to ensure continued donor assistance was a basic change in the organisation and management of CNDF which will restore it to the position of an autonomous non-government organisation. Further, in order to keep faith with the Nordic donors who raised funds om the basis of certain clear expectations, it is necessary that CNDF should remain true to its ideology which was defined comprehensively in Chaphter 3.

In recommending an organisation and management structure which satisfies these two conditions, the Mission wishes to emphasise the following principles:

> CNDF should regard itself, and be regarded as, an essentially Sri Lankan project. Its activities

...

are located, naturally, in various parts of the country. In their administration, however, these activities should endeavour to adopt a role which is supportive of other activities and activities elsewhere, and not act in competition with each other.

CNDF should continue to maintain a close relationship with the Ministry of Fisheries while preserving its autonomy as a non-government organization.

The organisation envisaged by the Mission consists of an Assembly of Donor Representatives, including the Government of Sri Lanka, a Board of Directors of seven members appointed by the Assembly of Donor Representatives, and a decentralised organisation which permits Regional Management Committees to enjoy maximum operational autonomy while ensuring that a central secretariat will undertake common functions such as coordinated purchase and supply of raw material, marketing and exports, and other services required by regions. An important function that the Central Secretatiat will undertake on behalf of the board will be to receive, disburse, account for, and audit funds received from donors and government agencies, and to monitor and report on the activities of the regional organisations.

In order to ensure the autonomy of CNDF and to introduce commercial and technical expertise the Mission recommends that official representation on the Board should be limited to one representative of the Ministry of Fisheries, and in the case of the regional committees one representative of the District Ministry. Other members should be selected to represent the donors, target groups, and technical, managerial, economic or sociological expertise. An important consideration would be the commitment of the directors and members of the regional committees to the ideology of the Foundation.

The Mission also recommends that the Community Development Programme be organised as an independent function. A Nordic Aid Committee should be established, consisting of representatives of the Nordic donor agencies, the community development division of CNDF and people's organisations, which will be responsible for the management of the community development programme.

6.4. Overall assessment of success in achieving objectives

As pointed out earlier, the lack of bench-mark information and indicators makes it very difficult for this evaluation to come to clear quantified conclusions regarding the achievement of objectives. However, after 13 years of operation, quite a few noticeable changes that can be traced back to CNDF have taken place in the original target area in Jaffna District. They have been discussed at lenght in the respective parts if this Report, and the main conclusions may be summarized as follows:

The industrial activities of CNDF have created a substantial amount of employment. The factories in Karainagar and Gurunagar employ nearly 700 persons, which secures for almost as many families their source of living. This is a highly impressive result against the background of the modest resources available at the outset. Roughly half of the employees come from the target villages. It is difficult to obtain a clear opinion as to what would have been the optimal share in this respect. Given the magnitude of this source of employment, it is logical that it is spread over a wider area. Still, CNDF, is absolutely vital to the target villages in regard to employment and income. Perhaps, one can add, too much so in the sense that the total dependence on CNDF would be fatal if its industrial activity is substantially reduced. This is to some extent already felt through the standstill in recruitments and the recent retrenchment of workers. Further retrenchments, which may be necessary against the background of the present state of CNDF as such and some of the activities in particular, will aggravate this problem. There is no doubt that CNDF is presently caught in a crisis of expectations in the target villages.

The social and castewise distribution of employment has improved substantially over the years. As the most recently recruited seem to be unwillingly in a majority among the retrenched, however, it seems that these gains are in danger of being reduced. CNDF has made an important contribution to the creation of female employment, and has broken down traditional prejudices against female wage-labour. However, the female employment has been highly unstable, and a great part of it is in danger of being lost.

...

Perhaps the most impressive impact of CNDF has been created by the boat production activity. In the Jaffna District alone it has given employment of approximately 4500 fishermen and 800 engaged in post-harvest fisheries. The production of nets and ice meant a quantitive and qualitative step forward for the fishing people of the region. Altogheter, there is no doubt that CNDF has contributed substantially to the modernisation and rationalisation of the fisheries in Jaffna and in Sri Lanka for that matter.

If we look at the social distributions of these benefits, the general impression is that the goods and services with the exception of small mesh cast nets have been beyond the reach of the really poor fishermen. In this sense one can say that the crucial objective of social and economic upliftment of the most oppressed and depressed coastal groups has only been achieved to a small degree. Of course, it is limited what an individual development programme can do in this respect, independently of the trends in society at large. CNDF has chosen to give its contribution as a supplemnt to the overall pattern of allocating resources to fishing-people in Sri Lanka. In this quantitative sense the results are impressive. The alternative would have been to remain a small-scale undertaking. That would probably have given a poorer qunatitative result. But it might have given more freedom to strive towards a more egalitarian social purpose.

What was originally an important objective, viz. improving nutritional standards among the undernourished sections of sosiety, has by and large not received much attention in the programme. The delivery of boats and nets has undoubtedly led to a substantial increase in catches, estimated to 10-12000 tons of fish and shrimps representaing an annual of 80-100 million rupees. But again a conscious policy of social distribution has been absent. This has partly been due to difficulties of combining it with other objectives, and the commercial needs of the Company. Also, it was found to be too ambitious a task for CNDF alone to break through the powerful distribution system.

...

The level of health, hygiene, housing, basic education and culture has undoubtedly been considerably lifted through CNDF's assistance. The problem, however, is that the target communities have not been able to generate sufficient self-reliance, whereby they can take over the institutions that have been established and develop them further on their own. That is a major shortcoming of the programme.

The long-term development objective of CNDF that the Evaluation Team was able to derive from official statements, reads as follows:

> "Improved social and economic conditions and self-reliance for the weaker sections of society".

Regarding improved social and economic conditions, our conclusion is that the number of people helped through CNDF is impressive compared to the resources available. The quantitative impact is not matched by the social distribution of the benefits. Regarding the achievement of self-reliance, the impact seems to be less positive than one could have hoped.

Annexes

I: Terms of reference

II: Map of Sri Lanka, location of Cey-Nor activities

III: Map of Karainagar

IV: Map of target areas, Karainagar

V: Tables 1-5 (boatbuilding)

VI: Specification of knitting machinery

VII: Description of Fisheries in Sri Lanka and the Jaffna District

VIII: The CNDF Fishing Fleet

IX: Proposals for Community Development Programme, 1981

X: CNDF's Financial Commitments 24.11.80

XI: CNDF Expenditure on New Projects

XII: Financial statements for CNDF

XIII: Work Programme of the Evaluation Team

XIV: CNDF Activities, 1967-1980 (chronogramme)

XV: List of Inputs, CNDF Activities

XVI: List of expatriate expert assistance

XVII: Literature References

XVIII: General experiences to be gained from the evaluation

XIX: Project Proposal

Terms of reference for an evaluation of the development activities of Norges Godtemplar Ungdomsforbund (NGU) and Cey-Nor Development Foundation Ltd. in Sri Lanka, supported by NORAD (hereinafter referred to as the "Programme").

I Background

During the period 1967 - 1980, NGU/ Cey-Nor have received grants totalling approximately 17,6 million Norwegian Kroner from NORAD for part financing of the Programme. The Programme consists of

- a boatyard
- a training centre
- a fishing fleet
- a fish processing unit with an ice plant

} all in Karainagar

- fish net factory in Gurunagar
- 5 ice plants on the eastern, western and southern coast of Sri Lanka
- a fish net factory in Kalpitiya (the location was later proposed moved to Puttalam).

The existing agreement between NORAD and NGU concerning expatriate personnel to the Programme expires on 30 June 1981. Before the agreement expires NORAD and NGU have decided to carry out an independent evaluation of Cey-Nor's activities. This intention was communicated to the Government of Sri Lanka on 28 July 1980. The Government has consented to this exercise.

II Participants, mode of work

For the evaluation task NORAD has appointed the following persons (their backgrounds in brackets):

Mr. Herman Watzinger (Leader of the team)
Mr. John Watton (Fishing, fish processing)
Ms. Shafinaz Hassendeen (Sociology)
Mr. Hans Peder Pedersen (Boatbuilding)
Mr. Eilif Knudsen (Economy, accounting)
Mr. C. Viswasam (Economy, management)
Mr. Pillai Manikam (technology, development policy)
Mr. Vegard Bye (Secretary of the team)

The evaluation will take place from 12 November to, approximately, 10 December 1980, it being understood that one or more of the participants may, after consultation with the Leader, shorten the period of field study in Sri Lanka. The evaluation shall be undertaken in cooperation with the Cey-Nor Development Foundation Ltd., the Government of Sri Lanka, and NORAD's Resident Representative in Colombo.

The work will include review of relevant documents as well as interviews with Cey-Nor officials and employees, expatriate experts, representatives of central and local authorities and representatives of the fishing population and others affected in the Programme areas.

III Tasks of the evaluation team:

1. Objectives

Bearing in mind that the agreement between NGU and NORAD expires on 30 June 1981, the evaluation team shall review the activities and achievements on the Programme, as specified in paragraph I. The assessment shall be related to objectives as stated in Programme documents and to the main social and economic factors influencing Programme implementation, including Government policie for the fishery sector.

2. Economic and financial aspects

The evaluation team shall:

2.1. Assess the overall development of the Programme concerning economic, organizational and managerial matters, including budgeting, accounting and auditing procedures.

2.2. Look into the present economic and financial status of the Programme and individual projects.

2.3. Assess the adequacy of the present and planned organizationa structures, its principles and regulations.

2.4. Discuss the development of local participation in decision-making in the Programme.

3. Boatbuilding

The evaluation team shall

review the development of the boatbuilding section and assess whether

3.1. it has devloped boats of appropriate materials, size and type,

3.2. training of local staff for the building and maintenance of the boats has facilitated local command over the technology used,

3.3. adequate maintenance facilities are made available for the boats produced through the Programme.

3.4. it has created a reasonable number of jobs,

4. Fishery

The evaluation team shall

4.1. Assess the fishing methods applied, their adequacy for the rational exploitation of existing fish resources, and for the rational use of Cey-Nor's fishing fleet.

4.2. Discuss how the technology applied in fishing operations relates to the local employment situation.

4.3. Assess whether the training of fishermen has been adequate and facilitated local command of operations and running maintenance.

5. Fish processing, marketing and consumption

The evaluation team shall

5.1. Assess the present state of the processing activities (filleting, ice produciton, icing, packing) particularly regarding a rational use of raw materials as well as machinery and labour. Assess maintenance procedures and organization of work.

5.2. Discuss the rationality and efficiency of the Programme's marketing system and its different links, including the international marketing of shrimps.

5.3. Assess the Programme's impact upon the diet of the local population and the Programme's ability to serve ordinary fishermen.

6. Fishing gear production

The evaluation team shall

6.1. Assess whether local command of the technology in the existing fishing net production is satisfactory, and whether the existing technology and production provides a reasonable amount of employment in relation to cottage production.

6.2. Discuss whether the fishing gear produced and spread by the Programme meets the needs of the fishing community, especially ordinary fishermen.

6.3. Consider Cey-Nor's role in the contract production of long lines.

7. Cooperatives

The evaluation team shall

Review the development of cooperatives in the various activities related to the Programme.

8. Social effects and development impact

The evaluation team shall

8.1. In general, assess to what extent a trend towards the achievement of the main development objectives in favour of the target groups can be observed.

8.2. Consider the effectiveness of the community development projects and their complementary effect to other Programme activities.

9. Future development

The evaluation team shall

9.1. If necessary, identify needs for specific efforts of consolidation of the Programme. Make recommendations on desirable actions to strengthen the Programme.

VI Reporting

A preliminary report, containing the main conclusions, shall be worked out before the departure from Sri Lanka. A final report is to be submittes to NORAD within one month later.

Nils Vogt
Assistant Director General

FISHERIES.

- Fishery Harbours.
- Existing Ice Plants.
- Proposed Ice Plants.
- Fisheries Training Centres.
- Fish Culture & Extension Centres.

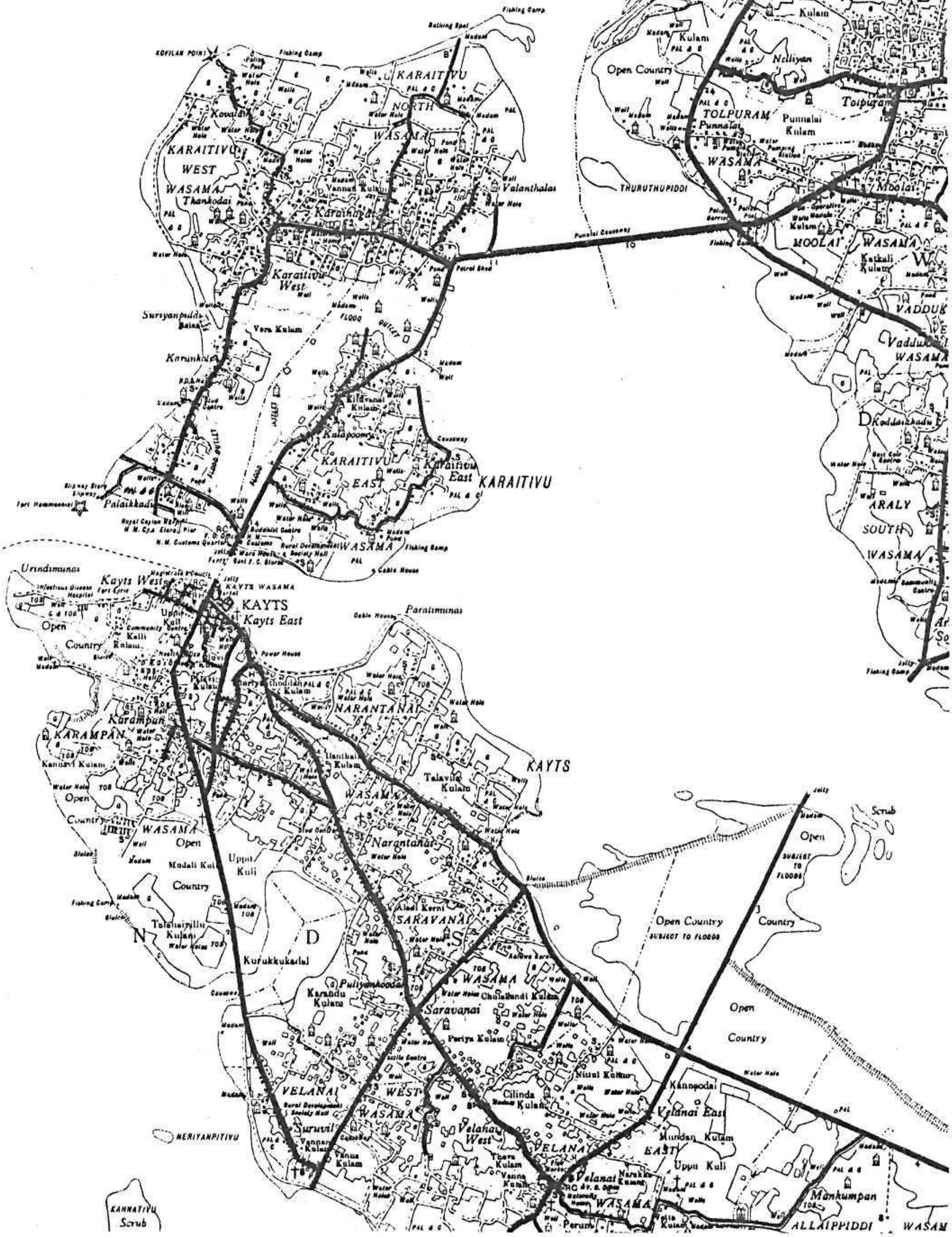
CEY-NOR ACTIVITIES IN SRI LANKA

Annex II
Map of Cey-Nor Activities in Sri Lanka.

Cey-Nor Project
Karinagar
Gurunagar
Elephant Pass
Mullaitivu
Manner
Puliyankulam
Chilavathurai
Padaviya
Medawachchiya
Trincomalee
Anuradhapura
Kalpitiya
Pamballa
Puttalam
Polonnaruwa
Dambulla
Valaichchenai
Batulu Oya
Chilaw
Padeniya
Wariyapola
Rambodagala
Kurunegala
Pulaveli
Kandy
Padiyatalawa
Kalmunai
Negombo
Mawanella
Gampola
Amparai
Inginiyagala
Batticaloa
Kalawankerni
Sinnapalamunai
Ginigathena
Nuwara Eliya
Mattakuliya
Colombo
Pitipana
Kiriella
Kuruwita
Maskeliya
Haputale
Siyambalanduwa
Panapitiya
Wellawaya
Pelmadulla
Rakwana
Uda Walawe
Tanamalwila
Talgaswella
Muruthawela
Tangalle
Galle
Mirissa
Polgahamulla

Miles. SCALE 10 9 8 4 2 0 10 20 30
Kilometres.

Annex III
Map of Karainagar and surroundings



Annex IV
Map of original target communities at Karainagar

Annex V
Table I

BOATS BUILT AT CNDF IN KARAINAGAR
MAIN SPECIFIACTIONS AND NUMBERS

Type	Material	Length	Built year	Total number built	Moulds built	Molds at the yard	Design	Comments
Life boat/dinghy	GRP	8'	79-80	8	0	-	Cey-Nor	Sandwich constr.
Catamaran	"	12'	79	2	2	1	"	Experimental
Dinghy	"	12'	71-73	40	1	-	"	Inland use
Kulla boat	"	15½'	79-80	10	2	1	copy of wooden	1 mould in Batticaloa, Matara
Clinker Cey-Nor	"	17½'	69-80	1300	5	2	Cey-Nor	1 mould in Kalpitiya
Round bilge	"	18½'	79-80	3	1	1	Cey-Nor	Experimental
Flat bottom	"	18½'	79-80	4	1	1	Cey-Nor	Experimental
Ferrocement sail b.	FC	20'	77	1	0	0	Benford, USA	At the yard
Norwegian type	GRP	25'	71-74	25	1	0	Norway-Viksund	
3½ tonner (E 26)	"	28'	76-80	150	2	1	Ceylon-Estlander	
Ferrocement round bilge	FC	28'	74-76	6	0	0	Canadian	The first one from Norway
Ferrocement round bilge	FC	32'	75-76	3	0	0	"	same frames as 38FC
Ferrocement, new type	FC	32'	77-80	11	0	0	Cey-Nor	
Ferrocement sail b.	FC	38'	77	1	0	0	Hartly, New Zealand	not finished at the yard
GRP boat 38'	GRP	38'	69-77	7	1	0	Cey-Nor, Norway	mould converted to boat
Ferrocem.Trawler	FC	42'	76-77	1	0	0	Hermanson	-
" "	FC	46'	77-80	6	0	0	"	
Research vessel	GRP	62'	77-79	1	1	1	Japan	mould could be used for 3-5 more boats

Type	Material	Length	Built year	Total number built	Moulds built	Molds at the yard	Design	Comments
Life boat/dinghy	GRP	8'	79-80	8	0	-	Cey-Nor	Sandwich constr.
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Ferrocem.Trawler	FC	42'	76-77	1	0	0	Hermanson	-
" "	FC	46'	77-80	6	0	0	"	
Research vessel	GRP	62'	77-79	1	1	1	Japan	mould could be used for 3-5 more boats

ANNEX V
TABLE 1

Annex V
Table 1
(cont.)

FIBREGLASS

TYPE OF BOAT	L.O.A	L.W.L	BEAM/BREADH	DRAFT	MOULDED DRAFT
8' - 0"	8' -0"	7' - 10"	3' - 6"	-	4"
12' - 0"	12" -0"	10' - 6"	5' -4"	0" - 9"	6"
Catamaram	12' -0"	10' - 9"	9' -0"	1" - 0"	9"
15' - 6" Kulla	15' -6"	12' - 5"	1' -9½"	0" -7 "	0. 7"
17' - 6" Stan	17' -6"	15' - 7"	6' -9"	1' -4½"	1' 0"
17' - 6" Flat	17' -6"	16' - 6"	6' -4"	0 -10½	0. 9"
18' - 6" Flat	18' -6"	16' - 6"	5' -7"	0' -7"	0. 6"
18' - 6"	18' -6"	16' - 7"	6' -9"	1' -5¼"	1.0 "
28' - 0"	28' -1½"	24' -6"	8' -8"	2' -10"	1' 11"
		FERROCEMENT			
32' - 0"	32' -0"	29' -0"	11'- 2"	04' -2"	3' -5"
42' - 0"	42' -0"	39' -6"	13'- 0"	05' -2"	4' -0"
46' -0 "	46' -0"	41' -9"	14'- 6"	05' -7"	4' -3"
62' -0"	17,950 M	15,00 M	04,300 M	1,950 M	01,67 M

/jr. 20/11/1980.

Annex V
Table 2

AREAWISE SALES OF BOATS, 1978-1980.

AREA	17½'	28'	38' F/G	25' F/G	28'F/C	32' F/C	42' F/C	46' F/C	45' FC	15½'	12'
Myliddy/ Mathagal/ Kankesanthurai/ Valvertithurai/ Point Pedro/ Chunnakam.	299	82	-	-	-	3	-	-	-	-	-
Jaffna/ Delft/ Vaddukoddai	38	17	1	2	-	-	-	-	-	-	-
Karainagar/ Kayts	80	11	-	2	1	3	1	5	-	-	-
Mannar	34	14									
Batticaloa	99	1	-	1	-	-	-	-	-	-	-
Trincomalee	40	12									
Killinochi	05	-									
Palai	01	-									
Negombo	-	01	-	1	-	-	-	-	-	-	-
Kalmunai	-	20									
Colombo	02	-	6	-	5	8	-	-	1	10	25
Mulaithivu	-	-	-	2	-	-	-	-	-	-	-
Thoduwawa	-	-	-	4	-	-	-	-	-	-	-
Wennappuwa	-	-	-	2	-	-	-	-	-	-	-
Chillaw/ Maruwella	-	-	-	11	-	-	-	-	-	-	-

TR/pa

Annex V
Table 3

DESCRIPTION OF CNDF BOATYARD

1. ESTABLISHED: 1968

2. COMMERCIAL PRODUCTION STARTED: 1970

3. FACILITY AVAILABLE:

Total Area under cover		- 31,862	s.ft.
Slip ways	1	- 140,0	ft.
	2	- 155,0	ft.

4. SECTIONS:

Office	- 1,260	s.ft.
Main Boatyard	- 10,575	"
Medium Size Boat Assembly Hall	- 3,500	"
Small Boat Production Hall	- 3,510	"
Work Shop	- 3,500	"
Carpentry Section	- 2,590	"

5. MACHINERY/TOOLS:

Boatyard - Air Compressure, Chain Blocks, Electric Sanders, Drillers, Diamond Cutters, Pneumatic Tools.

Workshop - Lathe Machine, Sharpening Machine, Hydraulic Press, Milling Machine, Electric Driller, Hack Sawing Machine, Hydraulic Bender, Electric Welding Transformers.

Carpentry Shop - Thickness Planners, Band Saws, Circular Saws.

6. STORES:

Main Stores -	2,695	s.ft.
Issue Stores F/G	1,200	"
Timber Stores	490	"
Tools Stores	220	"
Airconditioned Bulk Store for F/G Materials	432	"

7. TIMBER SAWING & STORING SECTION - 1,890 s.ft.

Machinery: Saw mill

The boatyard has the following units:

Boatyard office	Stores
Fibre Glass	Supplies
Carpentry	Sales
Mechanical	Personnel
Handling, Slipway	Drawing Office

Annex V
Table 4

LIST OF EMPLOYEES AT CNDF BOATYARD

Office staff	19
Supplies Division, store keepers etc.	15
Supervising Staff	10
Carpenters	49
Fibreglass Moulders	06
Caulkers	07
Painters	01
Engine Fitters	04
Engine Helpers	04
Mechanics	02
Machine Operators - Wood work	04
Machine Helpers -"-	05
Saw Doctor -"-	01
Saw Brazer -"-	01
Electrician	01
Blacksmith	01
Labourers (18 in GRP section as helpers	37
Total	167

Annex V
Table 5

PRODUCTION COSTS

28 FEET BOATS BUILT AT CNDF,
KARAINAGAR AND MATTAKULIYA

COST OF MATERIALS	QUANTITY	UNITPRICE	
Resin Accelerated	1300 lbs	12,40	16,120,oo
Gelcoat coloured	87 lbs	31,35	2,728,oo
Catalyst	25 lbs	43,20	1,080,oo
Accelerator	-	-	-
Release agent	10 lbs	67,90	679,oo
Pigment	-	-	-
C.S..Mat	490 lbs	22,42	10,986,oo
Wooven roving	110 lbs	25,90	2,849,oo
Acetone	10 gls	91,20	912,oo
Wax	10 lbs	10,87	109,oo
Topcoat	10 lbs	22,95	230,oo
			35.693,oo

COST STRUCTURE OF 28' GRP BOAT

1) Imported materials	35,693,oo
2) Timber	7,416,oo
3) Hardware etc.	6,250,oo
4) Launching & Trials running	370,oo
5) Sail cloth,mast etc.	705,oo
Labourers - 1300	50.434,oo
	7.280,oo
	57.714,oo
Overheads (150% of Labour)	10.920,oo
Profit (15%)	10.295,oo
B.T.T.	797,oo

SELLING PRICE - Rs. 79,726/-

Additions:

Sail cloths (40 sq.ft.)	600,oo
Mast (4" Dis x 16)	90,oo
Buck t	15,oo

Approved price - 66.500/-

SPECIFICATION OF KNITTING MACHINERY

GURUNAGAR:

Machine No.	Model & Type	Year of Manufacture	Ply
01	KGA-8-40	1965	4-15
02	KGA-1-30	1964	6-36
03	DKA-7-40	1959	2-9
04	KE-7-40	1960	2-9
05	DKA-7-40	1959	2-9
06	KD-9-30	1954	4-15
07	DKA-7-40	1959	2-9
08	PKA-7-40	1965	2-9
09	KD-9-30	1957	4-15
10	PKA-7-40	1965	2-9
11	DKF-14-25	1966	6-45
12	DKF-10-30	1965	4-21
13	PKA-7-40	1964	2-9
14	PKA-7-40	1963	2-9
15-16	SET-7-30	1980	2-12
17	SET-14-60	1980	12-54

MATARA:

01	PKA-7-40	1963	2-9
02	PKA-7-40	1964	2-9
03	KGA-8-40	1964	4-24
04	KGA-8-40	1965	4-24
05	DKA-14-20	1961	6-30
06	DKA-14-20	1962	6-30
07	DKA-14-25	1964	6-30
08	DKA-14-25	1965	6-30
09-14	Set 7-30	1980	2-9
15&16	Set 14-16	1980	12-45

LUNUWILA:

01	Set 7-30	1980	2-9
02	Set 7-30	1980	2-9
03-10	Set 14-16	1980	12-45

THE SRI LANKAN FISHERIES

1. NATURAL CONDITIONS

The total sea shore around Sri Lanka is estimated to be about 1,800 kms in length. In several places this shoreline forms bays, lagoons, estuaries and islands where fishing vessels may find shelter. But there are also lengthy distances of unprotected wave-ridden shores, where fishing has proved a lean occupation, especially during the monsoon periods.

The continental shelf around the island is rather narrow, from 5 to 25 n.m. i width. The whole shelf area, where most of the fish resources will be found, is about 30,000 sq. km. The bottom conditions, which are of vital importance when fishing methods are considered, are rather heterogenous. Generally one may say that in the West/South and East shelf areal bottom conditions are dominantly rough, with rocks and corals, but with sandy patches of lesser extent. The North/West and North areas, incl. Pedro Bank, have smoother bottom conditions, often muddy and with fewer rocks. But also there bottom trawling will be rather hazardous for the skipper unfamiliar with the area. The water drift around the island has proved to be predominantly from SW towards NE, though disrupted by seasonal events, i.e. the monsoons. Upwelling systems, which greatly determine the dimensions of biological processes, are not found to be present to a noticeable extent. The basic nutritional matter ("the fertilizers"), which eventually will be converted to fish, is therefore washed out from the land-side during rainy seasons etc. and brought to the ocean by rivers and streams. This is a basic feature which should be noticed since it effects both fish magnitude, composition and behaviour.

The monsoons which are of two types, SW-monsoon from May to September, and NE-monsoon from November to January, have an effect on fishery conditions in many ways. Firstly because they create rough weather conditions which may be difficult to overcome, especially by the open beach based crafts. Secondly because they carry rain, which in turn, through erosion and floods brings nutritional matter to the adjacent ocean. Many fish species gather in specific areas (estuaries) to spawn during monsoon seasons.

2. RESOURCES

The fish resources around Sri Lanka have not been estimated by modern scientific methods before the research vessel "Dr. Fritjof Nansen" during 1978 and -79 made 3 comprehensive studies where rough estimate of the total resources could be made. The maximum sustainable yield (MSY) estimate shows a total of 250.000 tons, whereof 170.000 tons will be from pelagic resources and 80.000 tons from demersal (bottom dwelling). These figures do not include shrimps. Estimates for shrimp productivity has not been established. Skipjack, tunas, sear (spanish mackerel), sharks, noise mackerel, herring, sprats and rastrelligger are the most common pelagic species. Prawns, skates, rock fish, mullet and silverbellies are important demersal varieties.

2. FISH PRODUCTION

Fish production estimates from 1979, which are not reliable as catch data, indicates a yield of 149.000 tons. This should give a catch increase possibility of 100.000 tons; it should be possible to increase the catch with 75%. In addition comes a planned increase of 33.000 tons from 17 to 50.000 tons from inland waters.

The coastal fisheries, from shore to 25 n. miles off, is the dominant sub-sector. In 1979 the different fisheries sectors contributed to total employment and production as shown in the table below:

	Craft operating %	Employment %	Fish prod. %
Coastal fisheries	94,5	97,6	88,4
Offshore & deepsea fisheries	0,2	0,5	1,3
Inland fisheries	5,3	1,9	10,3

Major fish producing districts are Jaffna, Puttalam, Colombo, Trincomalee and Mannar. Together they accounted for nearly 63% of total fish production in 1979.

4. FISHERMEN, BOATS AND GEAR

The 1978 employment estimate says that 67.000 persons are engaged in sea water fishing. In addition come 14.000 post harvest

employees (processing and marketing).

The fleet consists mainly of vessels smaller than 30 ft. The registered vessels per 1980 are classified by types as follows:

Table: Fishing Craft 1973-1980 (1979 not incl.)

Craft used	1973[1]	1974[1]	1975[1]	1976[1]	1977[1]	1978[1]
Trawlers bigger than 40 ft.	4	4	4	9	5	14
Tuna boats, bigger than 40 ft.	2	1	1	2	2	2
3½-ton mechanized craft (28-32 ft.)	2,003	2,124	2,294	2,445	2,443	2,545
Other mechanized craft (inkl. 17½' FRP-boat)	4,094	4,170	4,939	5,281	5,290	7,193
Other non-mech. crafts (vallams and vattumarams)	16,148	17,416	14,456	13,816	14,456	13,581
10 and 11-ton boats 38'	19	11	12	15	12	32

1) Source: Ministry of Fisheries (Official Statistics).

2) Source: Presentation of Fisheries Sector at Seminar and Fish Resources of Sri Lanka, their Exploitation and Utilization - Col. 28.8.80 by Dr. G.H.P. de Bruin.

The 28 - 32 ft. vessels are usually fitted with 25-40 HP inboard diesel engines, while the most popular outboard engines (for the 17½ ft. FRP and traditional craft are 6-15 HP petrol or kerosene fired outboard engines, often combined with local sail rigging. They are either planked or GRP-vessels.

The fleet is estimated to be working at about 40-50 thousand tonnes below acceptable yield. This leaves 60-70 thousand tonnes of MSY available for new crafts that has to be introduced into the industry. In terms of 3½-ton boats (working at "acceptable" capacity - 25 tonnes/year) this means that 2400 to 2800 new vessels are in demand.

It is, however, accepted that this surplus has to be caught by a combination of types of vessels.

5. GEAR

Gillnetting is the major type of gear in use in the ocean fisheries. Trawling, different types of lines and traps are also in use. Beach seines, which formerly were most usual, have become less important.

Shrimp trawling has developed during the last 10 years together with increasing export market prices and demand from local producers.

The craft most in use for trawling is the 3½-ton boat, where the gear is hauled by hand.

6. PRODUCTION AND ECONOMY

According to statistics available, fish production has showed a constantly growing trend during the 1970's (table ...).

Table: Marine Fish Production 1973-1978
(1000 metr.tonnes)[1].

Year	Marine Fish Prod.	Increase
1973	94	-
1974	103	9
1975	116	13
1976	123	7
1977	126	3
1978	140	14

1) Source: Ministry of Fisheries, Master Plan for the development of fisheries in Sri Lanka 1979-1983.

The government is providing a subsidy and modern boats to the fishing fleet. It also approves the prices for the different types of vessels. The subsidy rate is 35% of local cost for both boat and gear (50% for engine replacement). Loans are given up to 80% of total cost. The borrower has to be a member of a Fishermen's Cooperative or several (more than five) borrowers guarantee mutually for each other. Interest is usually kept at 17% per annum, and repayment period 4-5 years. This means that 13% of the cost has to be raised by the buyer himself. In the

case of a 17½ ft. GRP boat, which is the smallest type that gets a subsidy, which including gear may reach a total cost of Rs. 40,000, this will represent a cash payment of Rs. 5,200, still a large sum for the poorer fishermen.

The fishermen are usually poorly organized. Owners of mechanized vessels are, mainly due to the credit regulations mentioned above, members of a fishermen's cooperative. The cooperatives are usually administered by government officials (fisheries extension officers), and they have no other options than to provide credit for vessels.

7. TRENDS IN FISHING

It seems that the fisheries at present are in a state of transition as far as boats are concerned. The 17½ ft. boat market is rather saturated, and there is a common wish among owners of such boats to have a somewhat bigger type of vessel, 20-24 ft. in length, so as to widen their range of operation. The 3½-ton boats are still in demand, but there have been several proposals for alterations:

- To have a somewhat longer boat with bigger holding and accommodation capacity which could stay out for longer periods. These vessels should be decked.

- To have some smaller (25') vessels, with smaller motors which could have the same range of operation as the 28' crafts and with a possibility for sail fitting.

From a development point of view, there is need for a cheaper boat with acceptable efficiency which could be given subsidy and loan. This could be an upliftment possibility for poor groups who do not have economic ability to buy the 17½ ft. GRP boat. The CEY-NOR 15 ft. "Kulla" outrigger canoe is an attempt to provide such a boat and should have been granted subsidy and loan on ordinary terms.

Gillnets will continue to be the most popular gear in use, but it is necessary to bring alternative gear in use so as to spread fishing activities and create a more diversified resource

utilization. Feasibility and adaption tests of such gear will be necessary.

8. GOVERNMENT PLANS

The government presented in March 1980 a Master Plan for the Development of Fisheries for the period from 1979 to 1983. The basic objectives stated in this plan are:

- To step up production of fish and to raise per capita consumption to 44 lbs/head, 19,93 kg/capita.
- To raise the income and standard of living of fishermen who are among the least favoured groups in the community.
- To maximise employment opportunities in the fisheries sector.

The principal target is to increase fish production (inland fish inclusive) to 300,000 tonnes by 1983. The target is to be reached by:

- Introduction of 1950 additional 28-32 ft. vessels, whereof 950 shall replace old ones.
- Introduction of 2,400 new 17-24 ft. GRP vessels in addition to replacements.
- Introduction of 8,850 outboard engines, whereof 4,320 will be replacement.
- Ensuring gear and sparepart supplies.
- Harbour investments.
- Subsidy, credit and tax incentives.

The total cost of the plan is estimated at Rs. 1,900 million over the period, whereof Rs. 1,250 is expected to be foreign.

Even though the plan probably is too ambitious, it is representing a will to improve the fisheries sector. The important place given to the domestic marketing and the will to show care when selecting export commodities from the sector give the plan an acceptable social profile.

1. Fish Production - 1979:

Sub sector	Total Production (tons)	Value of Production (Rs.M)
Off shore & Deep Sea Fisheries	2,066	11,4
Coastal Fisheries	146,057	935,2
Inland Fisheries	17,150	38,03
Total	165,723	984,63

2. Prawn Exports - 1979:

Quantity .. 2,321[x)] tons

F.O.B. value .. Rs. 249,98 million

[x)] Net weight 3,869 tons.

3. Jaffna District - 1979:

Total fish Production (Coastal fisheries) .. 34,182 tons

Production of prawns .. 11,32 tons

4. Dried Fish Imports - 1979:

	Qty. (tons)	C.I.F. value (Rs.m
Maldiva fish	130	2,14
Dried fish	6,662	60,53
Preposed and Preserved fish	227	129,30
Others	227	0,55
Total	18,698	192,09

5. No. of Fishing Craft - Jaffna District:

Type	Number
28-32 ft. boats	471
17½ ft. FRP boats	637
Traditional mechanized craft with outboard motors	1,338
Non-mechanized craft	1,689
Total	4,135

xa/

FISHERIES IN JAFFNA DISTRICT

Jaffna district, which is part of the Northern Region, is separated in two parts. The peninsula where Jaffna town is situated, and the mainland. The entire district is extensively divided by shallow sea and fresh water lagoons. There are a number of islands, especially around the tip of the peninsula.

The total population of the district is about 820,000. 1971 census with calculated annual growth rate of 1,8% up to end 1980. The peninsula, where Jaffna town is situated, accommodates the greater part of the population, while the mainland part is less densely populated.

It is also on the peninsula and its surrounding islands that most of the district fishing activity is found.

The district's most natural fishing grounds will be Palk Bay, Palk Strait and Pedro Bank area from shore to midline boarder with India. These areas which together are about 2,000 square nautical miles $(n.m)^2$, are rather different from the other fishing areas around Sri Lanka. While the most common bottom topography is rocky with sandy patches on a narrow continental shelf, these grounds are wide, shallow and soft bottom banks with comparatively few rocks.

This reflects also upon the composition of harvestable fish resources. While in the other parts of the island, the resources mainly consist of demersal and pelagic fish species of more than 200 grammes individual weight, a large part of the resource in this area consist of shrimps and bottom sucking fish species like the silver belly fish (2-3 inches long). Other important species are mullets, skates and some sharks. Sardines are also available in seasons. Pelagic resources like tunas and mackerels are more scarce than in other areas around the island.

While current production is estimated to be 36,000 tons, it is projected to increase to 72,000 tons by 1984. This quantity should be within the maximum sustainable yield applicable to this district. This yield is estimated to be in the range of 70-100,000 tons.

Nearly 90% of the vessels used in fishing in the district are smaller than 32 ft. The two main types of vessels in use are:

1. The 28 ft. (3½ t) wooden or GRP boat, usually fitted with a 30 HP Yonmar Diesel.

2. The 17½ GRP boat, usually fitted with outboard engine and sails.

3. Traditional crafts, vallams and Kattarmarams which recently in some areas have been fitted with outboard engines. These crafts have a very limited range of operation and are mainly used in inshore fishery, especially the shrimp trap fishing.

The over 32 ft. vessels are found spread along the district's coast in main ports like Jaffna, Karainagar (CNDF fleet) and Point Pedro. However, this part of the fishing fleet does not at present play a significant role in resource utilization.

On the Northern coast of the region the nature of fisheries are different from the Palk Bay area and more similar to fisheries in other parts of the country, i.e. net fishing with bottom and driftnets.

The fishing fleet, particularly the 3½ tons boats are concentrated in a number of ports. The most important ones are:

- Karaiyoor (Gurunagar)
- Myliddy
- Point Pedro
- Thalayadi
- Kayts
- Delft.

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FISH IN THE SRI LANKAN DIET

Even though food sypply to a very high extent is based on cereals and vegetables, fish is the most important source of animal proteins accounting for more than 50% of the total animal protein supply in Sri Lanka. Per capita annual consumption of fish has however decreased from 32 lbs (14,5 kg) in 1972 to a low of 25 lbs. (11,3 kg) in 1978, partly due to reduced imports. In 1979 it was back to 28 lbs (12,7 kg).

Apart from providing the energy (carbohydrates) cereals also provide the main part of proteins in the diet. But these proteins are deficined in two essential amino acids, essential amino acid: a fraction of the protein that cannot be synthesized within the human body but must be supplied through the diet, namely lysine and methiomine. Fish, on the contrary, is rich in these components. Relatively small amounts of fish may therefore enrich an unacceptable diet to acceptable standards. This is the most valuable argument to raise the importance of fish above the level of an ordinary commodity in the market, and, together with some other protein sources, into a necessity for social welfare and development. One should also notice that the greatest protein demand is found among groups which often tends to have a low social position, namely pregnant women and children in growth.

The present 4 year target is to raise the average annual per capita consumption to 44 lbs (19,93 kg). No plans to secure a just distribution between different population groups have been made.

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The total number of vessels are estimated to be 3½ tons boats:

No. of Fishing Craft - Jaffna District:

Type	Number
28-32 ft. boats	471
17½ ft. FRP boats	637
Traditional mechanized craft with outboard motors	1,338
Non-mechanized craft	1,689
Total	4,135

Jaffna District - 1979:

Total fish production (Coastal fisheries)	.. 34,182 tons
Production of prawns	.. 11,32 "

While the most common gear in use in other parts of the country is gill nets of different types, a comparatively great part of the Jaffna fleet, especially those operating in the Palk Bay region are trawling for shrimps. An important by-catch in this trawling operation is silverbelly which is salted and dried on mats on the ground. Some of it is also used for chicken feed through fish meal produced with low technology (hand driven drying drums over a fire). The shrimps are iced upon arrival at the port and shipped to Colombo producers and exporters by truck.

Fish for local consumption within close range from the landing ports are handled by retailers on bicycle or several traders set to gather and hire trucks for transport of fish to the markets. District external marketing is carried on by wealthy fish merchants who often themselves are boat owners. Jaffna district caters for 25% of the entire fish production in Sri Lanka. Thus the Jaffna fisheries as far as market is concerned are of two kinds:

1. The net fisheries which are fishing for the national market, and where the most important district external market is Colombo area.

2. The shrimp fisheries which are focussed on the international market mainly the industrialized countries, but where some

by-catches of low prized species will be sold locally.

Though it is, from a welfare point of view, of primary interest to supply the local, partly under saturated protein market with fish, it should also be noticed that the shrimp fisheries play a role in the foreign exchange policy of the country. However, it should also be noticed that certain prerequisites should be implemented when a country with protein deficits goes into protein exports. Those will be:

- There is a guarantee that the shrimp fisheries is not in any way hampering the local supplies fishing, for instance by overhauling and destroying of nets.

- The national protein deficit is not of an order which may cause long term by effects through malnutrition and its consequences.

- The shrimp fishing is creating a de facto national project, and is not dependent on national subsidies which may give it an artificial life.

It is evident that all these three conditions have been violated on several occasions, and that the nutritional situation in several areas is not satisfactory.

However, the fact that the shrimp fishing is the main, and often only source of income for a great number of people in the Palk Bay area, has to be borne in mind. Then, of course the question of why the shrimps are not marketed locally for the benefit of the population may be raised. With the cost involved in shrimp trawling, especially due to high fuel prices, and the quantities gained per unit of fishing effort, it becomes clear that the only way of making this fishery viable is through exports.

A regional development plan, including a plan for the fisheries' sector will soon be completed.

THE FISHING FLEET AT CNDF, KARAINAGAR

The fishing fleet consist of the following vessels:

45 ft. ferrocement boats: initial cost 1.6 mill. ruppees.

CN 41 "ARNE" Built in 1977, 172 HP GM engine. Equipped with a mechanical winch and a h ydraulic power block. Echosounder, wireless, radar out of order. The vessel is at present doing trawl operations from Karainagar, but faces frequent breakdowns which hamper operations.

CN 43 - "KJELL"

Specifications as above, but no power block and no radar installed. The vessel is at present harboured at Colombo under Ceylon fisheries Corporations command. It is not operating due to different technical probelms.

CN 44 Built 1978. specifications as for CN 43. Stays in Colombo under CFC resposibility. Not working.

CN 44 Built 1977. Specifications as above. Stays in Colombo under CFC responsibility. Not working.

46 - F3 Built 1980 (46ft) Specifications as above. Not yet set in operation. Planned to be fitted with a hydraulic winch.

OTHER VESSELS

38ft. GRP Boat Built in 1978. 2 x 65 HP "SEAPOWER" engines. Total purch. cost Rs.500,000. Trawl equipped, operative.

38 ft. timber "SEAWORTH" Built 1973. 1 x 65 HP SEAPOWER engine. Purch. cost Rs.30,000 (customs auction) Operative.

32 ft. FC vessel Built 1977. No motion. Purch. cost Rs.150,000.

28 ft FC vessel (built in Norway) No motor.

28 ft. GRP Volvo Penta" Built in 1979. 30 HP Volvo penta engine. Purch. cost Rs.60,000 excl. motor. Motor given by SIDA. Operative in driftnet fishing.

28 ft GRP vessel - "2001" Built 1978. 30 HP Yanmar engine. Cost, Rs.100,000. Operative. Driftnet/trawl.

One of the 45 ft FC -vessels CN 42 "Svein" was wrecked. Insurance of Rs.600,000 has been repaid.

COMMUNITY DEVELOPMENT DIVISION PROPOSALS FOR 1981

THOPPUKKADU

1. Community Development Hall
2. Reading Room
3. Sports and Cultural Activities.

THOPPUKKADU HOUSING SCHEME:

1. Nursery School
2. Market facilities
3. Community Hall
4. Electricity
5. Children Park
6. Education - scholarship facilities for Std. VI to G.C.E. (A/L)

MADATHUVALAVU

1. Adult Education Centre
2. Education - Scholarship facilties for Std. VI to G.C.E. (A/L)
3. Electricity
4. Children Park
5. Registration of R.D.S. and Community Centre
6. Sports and Cultural Activities
7. Adult Education - including school children

OORI

1. Education - Scholarship programmes for 30 children
2. Housing Scheme
3. Electricity
4. Playground
5. Sports and Cultrural activities

THADDUVANKODDY

1. Nursery School New Building
2. Water Supply Scheme - Distribution lines
3. Toilet facilities
5. Quarters for the teachers.

DEVELOPMENT FOR SELECTED VILLAGES:

1. Neelahkadu
2. Poolokankadu
3. Araly East

Programmes: Nursery Schools
Housing Schemes
Water Supply Schemes
Electricity.

Annex X

CEY-NOR DEVELOPMENT FOUNDATION LIMITED

FINANCIAL COMMITMENTS AS AT 24TH NOVEMBER, 1980

		Rs.
People's Bank Foreign Branch (In Fixed Deposit - Rs. 5.7 M)		
Overdraft (limit (Rs. 7.7 M)	Rs. 8.7 M	
Karainagar - Current TR	2.1 "	
Overdue TR	4.0 "	
Matara - Current TR	3.9 "	
Overdue TR	1.3 "	
Pledge - Mattakkuliya	2.4 "	
Pledge - Mahawatto	4.3 "	
Kalpitiya - TTR - Machinery	5.0 "	
- do - - Import Bill	2.5 "	34,200,000
People's Bank Jaffna		
Overdraft	3.1 M	
Block Loan	7.7 "	
Overdue Interest	1.0 "	11,800,000
Advance Received from Ministry of Fisheries		
Sail Boats 1,000,000/- less 550,000/- expenses		450,000
Society Boats 4,304,680/- less 50% completed		2,150,000
Advances Received from Sri Lanka Ports Authority		
Barges Rs. 1,135,725/- less expenses Rs. 1,023,775		111,950
Harbour Craft Rs. 340,000/- less " " 6,660/-		333,340
Advances received from Ice Plants - At Chilavaturai & Talaimannar - Rs. 800,000/- less expenses Rs. 100,000/-		700,000
Known Sundry Creditors (Over Rs. 5,000/-)		
United Tractor & Equipment	118,605	
J.B. Industries	228,400	
Management Services Ltd.	9,190	
Ocean Foods & Trades	128,151	
Ceylon Fisheries Corp.	1,500,000	
Collettes Distributors	7,779	
Ceylon Fisheries Harbour Corp.	35,275	
Canagasooriar & Munsoor	6,500	
Alpha Limited	8,925	
General Sales Co. Ltd.	6,100	2,048,925
E.P.F. Karainagar	500,000	
Colombo	150,000	
PAYE Tax Colombo	50,000	700,000
	Rs.	52,494,215

EXPENDITURE OF NEW PROJECTS

As per the Balance Sheet as at 31st March 1979 the undermentioned amounts had been spent by Karainagar on account of new projects:-

(1) Matara	-	Rs. 3,631,178.68
(2) Kalpitiya	-	Rs. 1,169,488/26

However, the above expenditure has been funded by the following receipts.

MATARA

Plant & Machinery gifted	-	Rs. 1,374,925.54
Vehicle & Building fited	-	Rs. 800,000.00
Bank overdraft	-	Rs. 2,000,000.00
		Rs. 4,174,925.54

KALPITIYA

Ice Plant gifted	-	Rs. 665,208.25
Renault car gifted	-	Rs. 14,900.00
Received from FFHC	-	511,330.69
		Rs. 1,191,438.94

sgd/- W.E.Fernando
FINANCE MANAGER

7/12/80

FINANCIAL STATEMENTS

Table 1

Cey-Nor Development Foundation Ltd. - Amalgamated Balance Sheet (Rs. Million)

	31.12.1976		31.12.1977		31. 3.1979		31. 3.1980 Estimated	
Fixed assets		4.76		11.47		14.72		21.41
Current assets								
Stock- Finished goods	0.53		1.44		1.80		5.92	
work in progress	1.07				1.14		3.35	
Materials, debtors etc.	2.35		12.75		14.68		35.30	
Cash at bank and in hand	0.44	4.39	0.52	14.71	3.54	21.16	3.03	47.60
Current liabilities								
Sundry creditors	1.18		6.37		2.77		3.30	
Loans (Bank etc.)	0.71	1.89	3.78	10.15	16.67	19.44	45.01	48.31
Working capital		2.50		4.56		1.72		- 0.71
Deferred revenue expenditure		0.12				4.83		5.71
		7.38		16.03		21.27		26.41
Capital Fund								
Capital Fund	9.25		14.74		19.54		27.27	
Accumulated Profit & Loss	- 1,87		1.15		1.26		- 1.33	
Reserve		7.38	0.14	16.03	0.47	21.27	0.47	26.41

Table 2.

Karainagar Boat yard section - Profit & Loss Account (Rs. Million)

	1976		1977		1978 1.1.78 - 31.3.79		1979 1.4.79 - 31.3.80	
Sales Income		1.80		8,16		11.66		8.43
Correction made for changes in work in progress and finished goods				- 0.46		+ 0.53		+ 1.84
Sales value of produced goods		1.80		7.70		12.19		10.27
- Material and direct expenses	0.55		3.07		7.07		6.06	
- Direct wages	0.39	0.94	0.98	4.05	1.25	8.32	1.61	7.67
Sales value less direct costs		0.86		3.65		3.87		2.60
- Overheads		0.78		1.21		2.60		3.02
Net profit		0.08		2.44		1.27		- 0.42

Table 3.

Karainagar Processing section - Profit & Loss Account (Rs. Million)

	1976		1977		1978 1.1.78 - 31.1.79		1979 1.4.79 - 31.3.80	
Sales		1.06		1.01		1.60		3.52
- Materials	0.60		0.83		0.99		1.58	
- Wages	0.05		0.07		0.33		0.36	
		0.65		0.90		1.32		1.94
Sales value less direct costs		0.41		0.11		0.28		1.58
- Overheads		0.49		0.59		0.85		1.44
		- 0.08		- 0.48		- 0.57		0.14

Table 4.

Karainagar - Fishing Section Working and Profit and Loss Account 1977-80 (Rs. Million)

	1.1.77 - 31.12.77		1.1.78 - 31.3.79		1.4.79 - 31.3.80	
Sales		0.02		2.00		2.68
Less cost of Sales:						
Wages	0.03		0.32		0,25	
Other expenses	0.01		0.98		0.56	
Trawling costs	-	0.04	0.66	1.96	0.66	1.47
Sales value less direct costs		(0.02)		0.04		1.21
Less: Overheads		0.14		1.00		2.61
Net Operating Loss		(0.16)		(0.96)		(1.40)

Table 5.

Karainagar - Ice Plant - Profit and Loss Account (Rs. Million)

	1.1.77 - 31.12.77	1.1.78 - 31.3.79	1.4.79 - 31.3. 80
Sales	0.03	0.12	0.29
Less:			
Overheads	0.14	0.31	0.41
Net Loss for period	- 0.11	- 0.19	- 0.12

Table 6.

Gurunagar Fish Net Factory - Profit & Loss Account (Rs. Million)

	1976		1977		1978 1.1.78 - 31.3.80		1979 1.4.79 - 31.3.80	
Sales		1,09		3.97[1]		8.38		9.54
Correction made for changes in work in progress and finished goods		+ 0.13		+ 0.03		+ 0.77		+ 0.14
Sales value of produced goods		1.22		4.00		9.15		9.68
- Material	0.50		1.25		4.69		5.17	
- Wages	0.18	0.68	0.59	1.84	1.04	5.73	1.36	6.53
Sales value less direct costs		0.54		2.16		3.42		3.15
- Overheads		0.37		0.96		2.99		3.02
Net profil		0.17		1.20		0.43		0.13

1) Includes Long Lines Rs. 32.255

Table 7.

Gurunagar Fish Net Factory - LOng Lines Section Profit and Loss Account (Rs. Million)

	1978[1] 1.1.78 - 31.3.79		1979 1.4.79 - 31.3.80	
Income		0.73		0.47
Correction for changes in value of work in progress and finished goods		+ 0.03		+ 0.04
Sales value of produced goods		0.76		0.51
Less:				
Wages	0.31		0.28	
Less:				
Expenses	0.24	0.55	0.13	0.41
Net profit		0.21		0.10

1) First year with separate accounts for long lines production.

Table 8.

Mattakkuliya - Boat Yard - Profit and Loss Account (Rs. Million)

	1979 1.3.79 - 31.3.80		
Sales		5.35	Operation started at 1st March 1979
Correction made for changes in stock of work in progress and finished goods		0.09	
Sales value of produced goods		5.44	
Less: Material and other direct costs	2.46		
Wages	1.21	3.67	
		1.77	
Production overheads		0.97	
Net profit		0.80	

Table 9.

Matara, Polgahamulla Fish Net Factory - Profit and Loss Account (Rs. Million)

	1979 1.7.79 - 31.3.80	
Sales		3.56
Correction made for changes in stock of work in progress and finished goods		0.88
Sales value of produced goods		4.44
Less:		
Materials	4.01	
Less:		
Wages	0.28	4.29
		0.15
Production overheads		0.37
Net profit		- 0.22

Table 10.

Kalpitiya - Boatyard — Profit and Loss Account (Rs. million)

	1979 1.4.1979 - 31.3.1980	
Sales		0.10
Correction made for changes in stock of work in progress		+ 0.21
Sales value of produced goods		0.31
Less: Material	0.23	
Less: Wages	0.03	0.26
Sales value less direct costs		0.05
- Overheads		0.11
Net Profit		- 0.06

Table 11.

Kalpitiya - Beche-de-Mer Unit Profit and Loss Account (Rs. Million)

	1979 1.4.79 - 31.3.80	
Sales		0.06
Correction made for changes in stock of goods		+ 0.06
Sales value of produced goods		0.12
Purchases	0.07	
Wages	0.05	0.12
Sales value less direct costs		0.-
- Overneads		0.08
Net Profit / Loss		- 0.08

Table 12.

Karainagar and Mattakkuliya - Ratios of operating costs

Section and year	Materials[x/] as % of sales value of prod.goods	Wages as % of sales value of prod.goods	Total overheads as % of sales value of prod.goods	Net profit as % of sales value of prod.goods
Boat Yard - Karainagar				
1976	31	22	43	4
1977	40	13	16	31
1978	58	10	21	11
1979	59	16	29	- 4
Fish processing - Karainagar				
1976	57	5	46	- 8
1977	82	7	58	- 47
1978	61	21	53	- 35
1979	45	10	41	4
Fishing section - Karainagar				
1977		150	750	
1978		16	132	- 48
1979		9	143	- 52
Boatyard - Mattakkuliya				
1979	45	22	18	15

x/ including special direct expenses

Table 13.

Gurunagar - Ratios of operating costs

Section and year	Materials as % of sales value of prod.goods	Wages as % of sales value of prod.goods	Total overheads as % of sales value of prod.goods	Net profit as % of sales value of prod.goods
Fish Net Factory				
1976				
1977	31	15	24	30
1978	51	11	33	5
1979	53	14	31	2
Long Lines				
1978		41		28
1979		55		20

Summary of sales and operating costs 1.4.1980 - 30.9.1980 (Rs.Million)

Section	Sales		Direct cost of sales	Over-heads absorbed	Operating costs	Net Profit
	Budget	Actual				
Karainagar						
Boat yard	9.69	7.01	5.13	1.24	6.37	0.64
Fishing Oper.	2.56	1.07	0.75	0.61		(0.27)
Net mending	0.14	0.12	0.10			
Processing	1.91	1.32	1.16			
Ice Plant K.	0.38	0.25	0.18	0.25	1.647	(0.013)
Fish stall (Auto)	-	0.046	0.041			
Fish stall (Kach)	-	0.018	0.016			
Gurunagar						
Fish Net F.	5.40	5.01	4.72	Incl. in Direct cost		0.32
Long Line Sec.						
Ice Plant G.	0.24	0.10	0.07			
Mattakuliya						
Boat yard x/	4.97	4.25	3.07	0.51	3.58	0.67

x/ Jan. - Oct. 1980

Annex XII
Tabel 10

PROFIT AND LOSS 1979 FOR DIFFERENT SECTIONS

(BASED ON THE ACCOUNTS FOR THE DIFFERENT

SECTIONS) (Rs' 000)

Karainagar	Boat Yard section	Rs -	420'
"	Processing section	" -	140'
"	Fishing section	" -	1.400'
"	Ice Plant	" -	120'
Gurunagar	Fish Net Factory	" -	130'
"	Long Lines section	" -	100'
Mattakkuliiya	Boat Yard	" -	800'
Matara	Fish Net Factory	" -	220'
Kapitiya	Boat Yard	" -	60'
"	Beche-de-Mer Unit	" -	80'

WORK PROGRAMME OF INDEPENDENT EVALUATION TEAM FOR THE CEYNOR/NORAD DEVELOPMENT PROGRAMME

Initials stand for

HW	Herman Watzinger
EK	Eilif W. Knudsen
JW	John Watten
HPP	Hans Peder Pedersen
SH	Shafinaz Hassendeen
PPM	Panchanatham Pillai Manikam
CV	Chris Viswasam
VB	Vegard Bye

11. November (Tuesday)

7.00 a.m.	- Arrival Katunayake Airport
2.00 p.m.	- Introductory Meeting at NORAD's representation. Discussion of work tasks. Division work, time schedules, travel arrangements etc.

12. November (Wednesday)

9.00 a.m.	- Visit to CEY-NOR Head Office. Meeting with management. Visit to Mattakuliya Boat Yard. Institute of Fisheries, Technology and Training Centre.
3.30 p.m.	- Meeting with Board of CEY-NOR at Ministry of Fisheries, Colombo 3.
7.00 p.m.	- Cocktails hosted by CEY-NOR at Hotel Lanka Oberoi.

13. November (Thursday)

9.00 a.m.	- Meeting at CEY-NOR with officials. Individual work.
7.30 p.m.	- Buffet dinner hosted by Steinar Skjaeveland, NORAD representative.

14. November (Friday)

7.30 a.m.	- Departure to Jaffna by plane.
9.00 a.m.	- Arrival in Jaffna.
1.00 p.m.	- Meeting with Management of CEY-NOR Karainagar. First inspection of buildings, factories, etc.

15. November (Saturday)

8.30 a.m. - First inspection of buildings, factories etc. in Gurunagar.
Inspection of Gurunagar fishing harbour.

2.00 p.m. - Inspection of CD projects at Thoppukadu, Karainagar and Madathuwalavu.

16. November (Sunday)

9.00 a.m. - Sightseeing and visit to Myliddy Fishing harbour.

2.30 p.m. - Team meeting.

17. November (Monday)

- Karainagar -
Individual work.

18. November (Tuesday)

9.00 a.m. - Karainagar -
Individual work.

2.00 p.m. - Meeting with Mr. Hendrickson, Fisheries Expert (whole team).

19. November (Wednesday)

8.00 a.m. - Meeting with Vadukodday NGU organization.

9.30 a.m. - Meeting with G.A. Jaffna,
DD (Planning) Jaffna district and
DFEO (Jaffna) (whole team).

11.30 a.m. - Meeting with Mayor of Jaffna and MMC's of Muncipal Council, Jaffna (HW, CV, EK, VB).

1.30 p.m. - Visit to District Fisheries Training Centre - Gurunagar (HW).

2.00 p.m. - Visit to Kayts. Meeting F/O. Kayts and Manager, People's Bank (SH).

3.00 p.m. - Visit to Pasaiyoor Fishing Village - Discussion with fishermen (HW).

20. November (Thursday)

a.m. - Individual work in Jaffna and Karainagar.

2.00 p.m. - Meeting with Trade Union Representatives of Karainagar and Gurunagar CEY-NOR installations (HW, CV, EK, SH, VB, PPM).

(a) Engineering Workers Union
(b) CMU
(c) LJSS.

21. November (Friday)

9.00 a.m. - Nursery School Thoppukadu.
Meeting with:
1. R.D.S. Thoppukadu
2. Valarmathu Mandran Madathuvalavu
3. Einstein's community Centre, Thoppakadu
4. Women's R.D.S. Thoppukadu
5. R.D.S. Neelankadu

11.00 a.m. - Nursery School - Oori
Meeting with:
1. R.D.S. Oori
2. Goodtemplar organization, Oori

4.30 p.m. - Meeting with two representatives of Jaffna University (Ms. K. Sivathamby, Dept. of Tamil and N. Balakrishnan, Dept. of Economics)

22. November (Saturday)

9.00 a.m. - Nursery School - Thoppukadu
1. Opening ceremony
2. Meeting with:
(a) School Development Society Thoppukadu
(b) School Development Society, Oori.

23. November (Sunday)

7.00 a.m. - 1. Visit to Analaitivu (one group)
2. Visit to Thadduvankoddy (CV and EK)
3. Visit to Gurunagar, Myliddy and Mathagal Fishing villages (SH)

6.30 p.m. - Cultural Show hosted by G.A. Jaffna.

24. November (Monday)

- Final discussions with officials of Karainagar Factory. Visit to Neelankadu, Oori and Thoppukadu villages (SH).

25. November (Tuesday)

- Departure from Jaffna.

26. November (Wednesday)

- Visit to cultural sites (Cultural triangle of Sri Lanka).

27. November (Thursday)

9.00 a.m. - Visit to boatyard, Mattakuliya and Ferro-cement Centre, Fort (EK, JPP).

2.00 p.m. - Team meeting.

28. November (Friday)

6.00 a.m. - Visit to Kalpitiya Boat Building and Ice Production. Units (JW, JPP).

Visit to Matara Boatyard and Polgahamulla net factory (HW, CV, EK).

3.00 p.m. - Meeting with Mr. Charlie Abeysekera.

29. November (Saturday)

a.m. - Individual work.

p.m. - Tea with Mr. Fjoertoft.

30. November (Sunday)

3.00 p.m. - Meeting with Mr. Richard D. Karunairajan.

1. December (Monday)

a.m. - Visit to CEY-NOR office (CV, EK).
Individual work.

3.00 p.m. - Team meeting.
Presentation/Discussion of preliminary drafts.

2. December (Tuesday)

9.00 a.m. - Visit to CEY-NOR Office.

10.00 a.m. - Ministry of Fisheries (PPM, HW, JPP)

p.m. - Individual work.

3. December (Wednesday)

9.00 a.m. - Meeting with Mr. W. Amerasekera (CEY-NOR Board Member).
Individual work.

2.00 p.m. - Team meeting.

4.00 p.m. - Meeting with Richard D. Karunairajan.

4. December (Thursday)

9.00 a.m. - Meeting with Mr. Chaumugan, Deputy Secretary to the Treasury

- Individual Work and Team Meeting.

2.30 p.m. - Meeting with Dr. Wickrema Weerasooriya, Ministry of Plan Implementation (HW & CV).

4.00 p.m. - Marga Institute.

5. December (Friday)

9.00 a.m. - Meeting with Ministry of Finance.

3.00 p.m. - Meeting with Leader of Opposition.

7.00 p.m. - Dinner hosted by Mr. Reidar Dale.

6. December (Saturday)

9.00 a.m. - Team Meeting - Discussion of Drafts.

7. December (Sunday)

4.00 p.m. - Team meeting - Discussions of drafts/ Impact assessment.

8. December (Monday)

9.00 a.m. - Meeting with Mr. Amera Weeraratne, Secretary Ministry of Fisheries ?

2.30 p.m. - Meeting with NORAD Resident Representative.

5.00 p.m. - Meeting with Mr. Festus Perera, Minister of Fisheries ?

7.00 p.m. - Reception hosted by Mrs. Karin Rajan.

9. December (Tuesday)

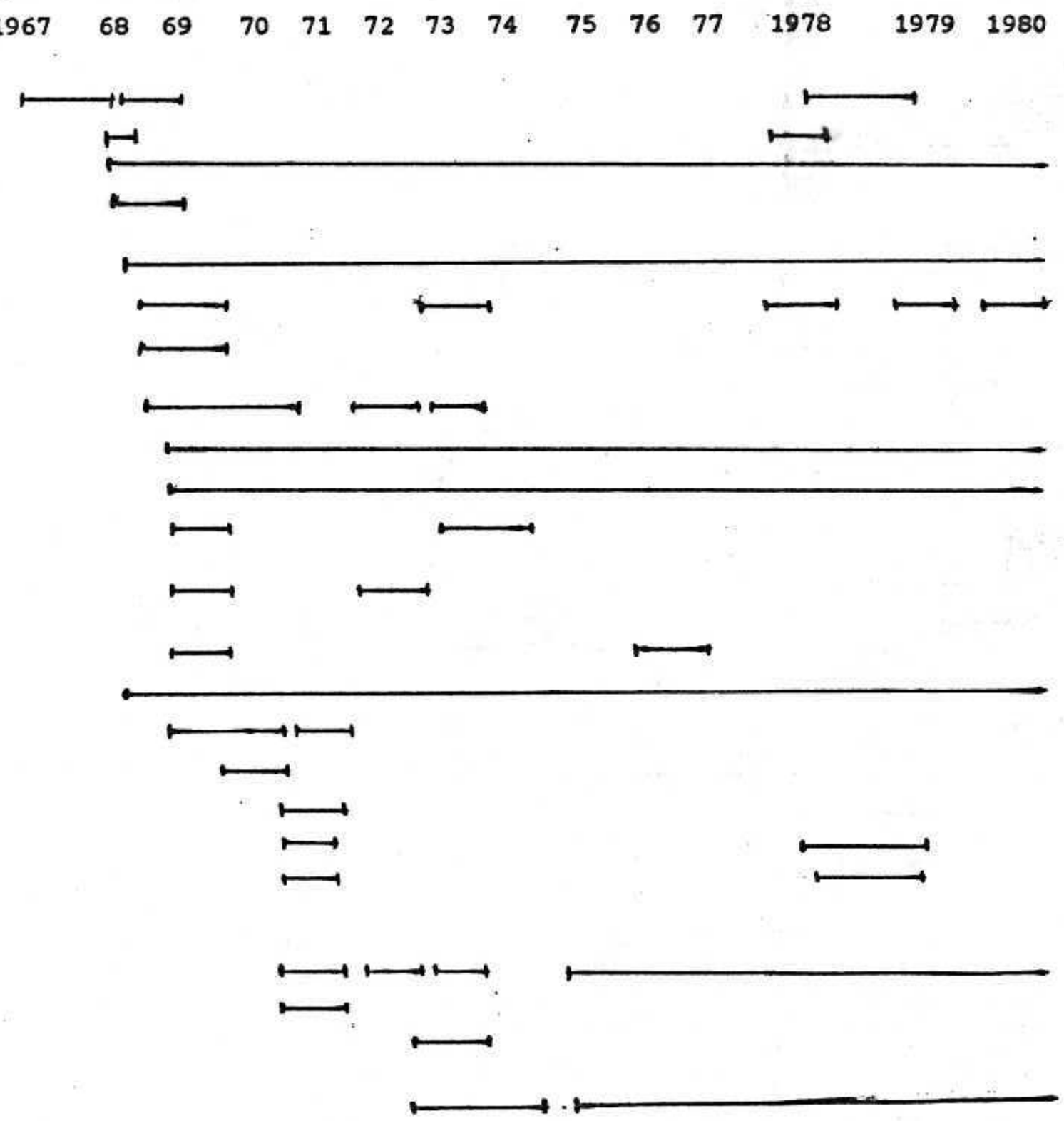
9.00 a.m. - Team meeting (Final Review).

10. - 15. December. Editorial work.
Departure from Sri Lanka
(Norwegian team-members)

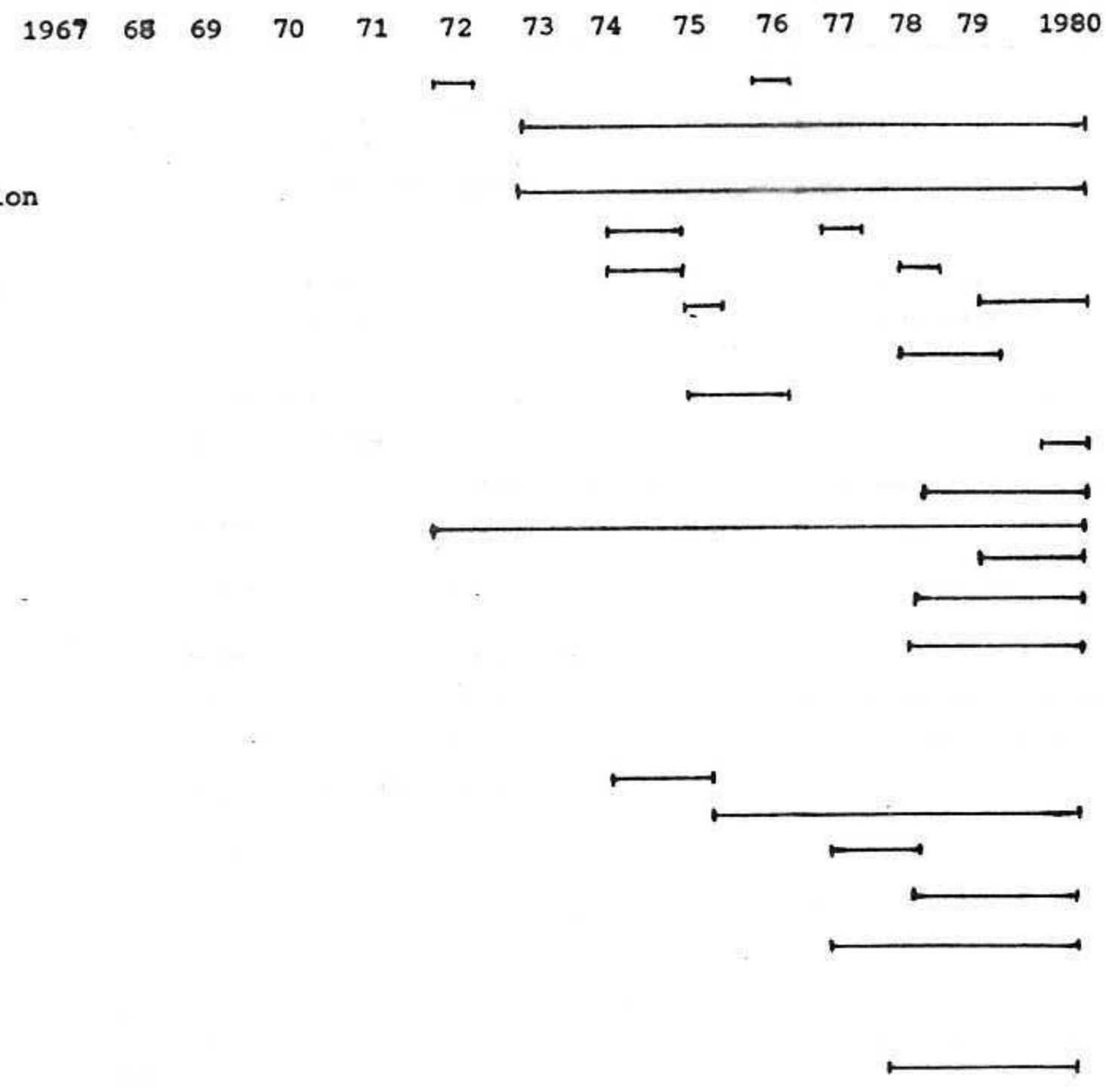
Annex XIV

CHRONOGRAMME OF CNDP ACTIVITIES 1967-1980

ACTIVITIES / KARAINAGAR



1. - building and later extension boatyard
2. - production of fibreglass fishing vessels 38 ft.
   17½ ft.
3. - training of local fishermen
4. - fisheries and training by means of programme produced vessels
5. - experimental fisheries
6. - building of training centre
7. - building later extension of ice factory and cold storage facilities
8. - construction and running of health centre (1)
9. - social and youth activities
10. - provision of credits to fishermen
11. - construction later improvements of water and electricity facilities
12. - experimentation with and production of dried silverbelly
13. - in service training in boatyard
14. - training in training-centre (3)
15. - demonstration of boats through fisheries cooperatives
16. - experimentation and production of fishing vessel 25'
    12'
17. - installation of new production equipment for Boatyard
18. - installation of water facilities, latrines day care centre & other social yields in these Karainagar villages (2)
19. - organising organisation of shrimps & prawns
20. - Provision of fishing nets to poor fishermen
21. - experimental later ordinary production processing and export of shrimps/prawns



22. - introduction of new transport equipment
23. - provision of protein rich food to children and national traing of mothers
24. - establishment of servicing machine centres with instruction
25. - building of new ice factory
26. - construction of ferrocement boats (38 ft later 42 ft)
27. - 42 ft
    46 ft
28. - construction of new design fibreglass boats 62 ft
    18½ ft.
29. - construction of low cost houses
30. - educational and cultural activities on community level
31. - workshop training programme, carpentary shop
32. - handicraft training and production
33. - marketing of hand loom products

ACTIVITIES / GURUNAGAR

34. - modification of buildings for fish factory
35. - fish net production
36. - building of ice factory
37. - ice production
38. - long line assembly

ACTIVITIES / COLOMBO

39. - retail sale of fish

1967 68 69 70 71 72 73 74 75 76 1977 78 79 1980

40. - boat building (Mattakuliya)(28 ft fibreglass)
41. - production of fish boxes (Mattakuliya) (5)
42. - installation of ice plant (6)

ACTIVITIES / KALPITIYA

43 - construction of boatyard
44 - boat building (17½' fibreglass)

ACTIVITIES / LUNUWILLA - WENNAPPUWA

45 - construction of fish net factory (7) (not started yet)

ACTIVITIES / NILWELLA

46 - construction of boatyard
47 - construction of ice plant

ACTIVITIES IN MATARA

48 - modification of buildings for fish net factory
49 - production of fish nets

ACTIVITIES IN KALLUWANKERNY

50 - construction of ice plant

ACTIVITIES IN MANNAR

51 - construction of block ice plant (8)

COMMENTS :

1. In 1974to be taken over by save the children/Norway.
2. Additional funds were granted by Norwegian Housewives Association.
3. Training centre shut down in 1971, when Government started District Training Centre in Jaffna, buildings later used for office, subsequently stores.
4. Building and training and operation is a Government responsibility, funds also provided by Norwegian Association of Housewives.
5. This activity was taken over from Ceylon Fisheries Corporation (CFC).
6. This ice plant founded by NORAD was originally intended to be installed in the Mannar District. The change of location took place.
7. Originally projected for Kalpitiya.
8. Provided by Government when the NORAD financed ice plant was decided to be installed in Colombo.

ANNEX XV

LIST OF INPUTS - CEY-NOR ACTIVITIES

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No.
1967	FINANCIAL	Boatyard and equipment for fibreglass boats	NGU/Norad	Kr 221.000	1,2
1968	FINANCIAL	Buildings, harbour, shipway	NGU/Norad	Kr 725,000	2,6,7
	EQUIPMENT	Fishing boats, miscellaneous equipment			13,14
	EXPERTS	Fisheries training			2,3,4,5
		Fibreglass boat construct			13,14
1969	EQUIPMENT	Freezing equipment, ice machine	NGU/Norad	kr 270,000	11,7,
	FINANCIAL	Miscellaneous			
	EQUIPMENT	Freezing equipment	NGU/Norad	Kr 524.920	7
	FINANCIAL	Building, reception complex			
	EXPERTS	Fisheries instructors			4
		Civil engineering			17

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No.)
1970	FINANCIAL	Health Centre, Welfare, land acquisition, stores,	NGU/Norad	Kr 649,000	8.9,10
	EQUIPMENT	Water scheme, machines			17,18
	EXPERTS	Cold room equipment and Ice plant			
	EXPERTS	Fishing			3,14
	EXPERTS	F:G: Boat-building			2, 16
1971	FINANCIAL	Raw materials, Reception complex, stores	NGU/Norad	Kr 500,000	7, 11
	EQUIPMENT	Shrimp process			19,21
	EXPERT	Cold room equipment and Ice plant			14
1972	EXPERT	Mr.F:H. Meyer Shrimp processing Training personnel	NGU		19

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No:)
1973	FINANCIAL	Fishing net factory - Gurunagar			
	EQUIPMENT	Fish separator	NGU/Norad	Kr 432,000	5,7. 21.
	EXPERT	Anthropological research	NGU		
	EXPERT	Mr.Lyngroth-Fibreglass technican	NGU		
	EXPERT	Sivent Runhang) David Christopher) fishing	NGU		5
		Sheinor Kosak - Refrigeration	NGU		24
1974	EXPERTS	Feasibility study ferrocement boat production	NGU/Norad	Kr 175,000	26
1974	OPERATIONAL SUPPORT		NGU/Norad	Kr 126,000	
1974	EQUIPMENT	Ice plant-refilling ice machine			
		28' fishing boats fishing gear	NGU/Norad	Kr 410,000	
		Twining machines-net factory			34, 35
	FINANCIAL	Raw materials for net production	NGU/Norad	Kr 500,000	34, 35

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No.
1974	EQUIPMENT	Factory Equipment	Norad	nKr 485,000	34.35
			UNF	nkr 250,000	
			SIDA	nKr 528,000	
			NGU	nKr 285,000	
1974	EQUIPMENT	Ice plant)		Kr 350,000	
		Ice plant extension)	NGU/Norad	Kr 265,000	
		IQF freezing equipment)		Kr 125,000	
	EXPERTS	Mr Sorensen checking operations at net factory	NGU/Norad		34.35
1975	EQUIPMENT	Production equipment			24
	FINANCIAL	Construction of 38 ft. Ferrocement boats	NGU/Norad	Kr 660,000	26,27
	FINANCIAL	Ferrocement boat building and equipment			
	EQUIPMENT	Equipment for boatyard slipway welding equipment and air compressor			
	EQUIPMENT	Construction of 2 32 ft. ferrocement boats and fishing gear	NGU/Norad	nkr 80,000	26
			Staranger	nKr 50,000	27
		Construction of one 32ft. ferrocement boat	NGU/Norad	nKr 228,000	28
			Iceland	nKr 80,000	

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No.)
1975	EXPERTISE	Mr. Sorenson Net factory	NGU/Norad		35
		Mr. H. Hermanren Boat builder/Ferrocement	FAO		26,27
		Mr. K. Marknssen Master fishermen	NGU/Norad		
		Mr. Svein losnaes			
1976	EXPERTISE	Experiment with Solar Energy Oven	NGU	Kr 35,000	12
	FINANCIAL	Operational suppot	NGU	Kr 445,000	
	EQUIPMENT	2 fishing boats of ferro-cement, fishing gear	NGU	Kr 1075,000	26,27
	VEHICLE	3 vehicles for transport of fish and water			22
	FINANCIAL	Small scale industry	NGU	Kr 42,000	31,32
	EXPERTISE	Training support	NGU	Kr 32,000	12
	FINANCIAL	Construction of 2 46 ft. Ferrocement vessels	NGU/Norad	Kr 870,000 Kr 355,000	12
	FINANCIAL	Construction of 3 nos. Ferrocement trawlers with fishing gear	NGU/Norad	Kr 870,000	26,27
	VEHICLE	1 Volkswagon Microbus 1 Renault 1 Austin Maxi	NGU	Kr 85,000	22

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No.)
1976	EXPERTS	Mr. Simon Roksund Fishing leader Mr. David Christopher Master Fisherman Mr. A. Sandvick Master Fisherman	NGU/Norad	Kr 85,000	22
1977	FINANCIAL	Construction of 3 45 ft. boats	NGU/Norad	kr 1,939,000	35,38
	EQUIPMENT	Purse seing drift net lines			
	BUILDINGS	Extension to boatyard	NGU/Norad		24 (1)
	VEHICLES	Bowser, Lorry & 6 trailers to lorries	NGU/Norad		
	EQUIPMENT	Ice machine	NGU/Norad	Kr1,482,800	37,47, 50, 39
	Operational	Operations	NGU/Norad	Kr 445,000	5, 25,27, 29,31,32,33
	EXPERTS	Mr Sandvick - Fishing Mr.David Christopher - Fishing	NGU		5

YEAR	KIND OF INPUT	DETAILS OF INPUT-DISPOSAL	SOURCE	AMOUNT	ACTIVITY (Code No.)
1978	FINANCIAL	Construction of Ice plant	NGU/Norad		37,43
			Govt. of Sri Lanka		47,50
	FINANCIAL	Fish net factory	Norad	Rs.11.5 million	45,48
			Govt.of Sri Lanka	Rs.6.00 m	
1979	EXPERTS	Mr.Viggo Karlsen - Mechanical training			
		Mr. Tor Henrickson - Fishing			
	FINANCIAL	Operational	NGU/Norad	Kr 2214,000	27,31
	FINANCIAL	Fish net factory - Kalpitiya	CEY-NOR	Kr3,799,125	44, 46, 47, 48

LIST OF EXPATRIATE EXPERT ASSISTANCE

Annex XVI

BOAT-YARD

(1) 1968/1969

Period - one year

(a) Mr.Mol - Naval Architect/Boat Design

(b) Mr.Buckey - Marine Engineering

Designed and constructed first fibreglass 38' boat to be used by fishermen's training school.

(2) 1970/1972

Period - two years

(a) Mr.Atle Berg Nielson - Boat Builder/Project Leader

(b) Mr.Watland - Fibreglass Technician (Six months)

Started Fibreglass boat production. Designed and constructed 25' fibreglass boat. Started line production of 17½' fibreglass boat.

(3) 1973

Period - Two weeks

(a) Mr.Lyngroth - Fibreglass Technician

To teach finishing techniques in fibreglass work.

(4) 1975 TODATE & CONTINUING UPTO 1981

MR.HARRY HERMANSON - Boat Builder/Ferrocement - Consultant

Established ferrocement boat-building fitted out 28' ferrocement boat brought from Norway. Constructed 3 Nos. 28 feet ferrocement boats, 3 Nos. 32' ferrocement boat which were extensions of the 28' boat. Designed a new 32' ferrocement boat and had started a production line in 32' ferrocement boat, continued with improvements to this boat and finally got the boat approved by Norsk Veritas. Has constructed a 42'

ferrocement boat and six 46' ferrocement boats. Has trained workers in reading drawings, expanding drawings to full scale and lofting, assembling, frame work and construction of hull. Has also trained workers in welding, use of equipment and fitting out boats, and in mechanical work. Has trained boat-yard Management/Technical personnel in technical aspects of boat-building and has been instrumental in arranging training for boat-yard.Production Manager in Small Boat Design - Workshop conducted by FAO. Has assisted in developing new designs for small fibreglass boats suitable for adoption to sailing.

Has embarked on two new projects by selling the idea to proper authorities.

(1) Construction of Ferrocement Barges
(Ordered by Port Authority)

(2) Use of Sail power for traditional 28' fibreglass boat.
(Financed by US Aid and Ministry of Fisheries)

(5) 1979

Period - One year

(a) Mr.Viggo Karlsen - Mechanical Training Instructor

Trained workers in mechanical workshop. Could not achieve satisfactory results as he was not fully equipped to train personnel under local conditions. Requested Norad Assistance to better equip workshop before he could undertake training of workers on a more planned basis.

FISHING

EXPATRIATE PERSONNEL

(1) 1969

Period - six months

(a) Mr.Borge Otterlie - Fishing Instructor

(b) Mr.Elder Fjortoft - Fishing Instructor

Establishment of Fishermen's Training School and training of 1st batch of trainees.

(2) 1970

Period - one year

(a) Mr.Borge Otterlei - Project Leader cum Fishing Instructor

Training second batch of fisheries trainees and management of Project.

(3) 1973

Period - Six months

(a) Mr.Sivert Rundhaug - Fishing Leader

(b) Mr.David Christopher - Master Fisherman

Commencement of Commercial Fishing trials using 38' Fibreglass boat and 38' wooden boat(Trawl fishing).

(4) 1975/1976

Period - Six months

(a) Mr.K.Markussen - Master Fisherman

Demonstrating and popularising first ferrocement vessel brought down from Norway and outfitted in boat-yard. Could not achieve much as boat was ready only during the latter part of his stay.

(Contd.....2)

(5) 1976/1977

Period - one year

(a) Mr.Simon Roksund - Fishing Leader

(b) Mr.David Christopher - Master Fisherman - Fishing gear

(c) Mr.A.Sandvik - Master Fisherman - Fishing

(6) 1977/1978

Period - one yeqr

(a) Mr.A.Sandvik - Fishing Leader

(b) Mr.David Christopher - Master Fisherman

Period (5) and (6)- Expatriate Personnel were sent down to establish the commercial fishing unit of Cey-Nor using the fleet of 6 trawlers to be built by Cey-Nor with Norad/NGU assistance. During period (5), the expatriate personnel were mainly involved in assisting the boat-yard in selecting equipment for trawlers under construction and instructing boat-yard on the lay out of equipment and gear on trawlers. Part of period (6) was also an extension of work connected with period (5). Fishing operations started in period (6) with two ferrocement trawlers. Mr.Sandvik trained skippers in use of electronic equipment, manoeuvring vessels, tracking new fishing grounds. Mr.David Christopher trained crew in construction of trawl gear and mending of nets.

(7) 1979-TODATE & CONTINUING UPTO 1981

Period - two years

MR.TOR HENRICKSON

Continuing fishing operations. Designed a high operating trawl. Tracking new fishing grounds in Colombo/South.

ESTABLISHMENT/ADMINISTRATION

(1) 1969/1970

Period - Six months

Mr.Arne Fjortoft

Reorganisation and handing over Project administration to FFHC.

(2) 1968/1969

Period - One year

Mr.Lars Unli - civil Engineer/Project Leader

Construction of buildings for boat-yard/Processing.

(3) 1975/1980

Period - 4 years - part time
1 year - full time

Mr.Svein Losnaes - NGU Resident Representative

Maintained Liason with Cey-Nor and NGU.

SHRIMP PROCESSING

(1) 1970/1971

Period - One year

Mr.Steinar Rosak - Refrigeration

Installing cold room equipment and Ice-plant.

(2) 1973

Period - two weeks

Mr.Steinar Rosak - Refrigeration

Checked all refrigeration and ice-plants Installation.

(3) 1972 TO 1975

Mr.F.H.Meyer - Processing Expert/NGU Representative

Started shrimp processing; planned and established processing unit. Trained personnel in processing of shrimps, secured new markets when there was heavy set back in International shrimp market in 1974. Established new customer in Denmakr for cooked prawns. Helped in educating workers in fish handling. As NGU representative played key role in planning for future and increased understanding between NGU and Ceylonese Board.

FISHING NET FACTORY

(1) 1974

Period - two weeks

Mr.Sorensen and Assistant

Checking installation and start-up of factory machinary.

(2) 1975

Period - Two weeks

Mr.Sorensen

Checking operation of net factory.

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GENERAL EXPERIENCES GAINED FROM THE EVALUATION

1. Planning, preparation, design of the Programme.

The Programme was initiated without any prior establishment of knowledge about the target area. Also, there was insufficient clearness and realism as to the objectives. The planning must thus be characterized as insufficient. (See also point 4.)

2. Organization of the Programme.

As the Programme was under the responsibility of a non-governmental organization, NORAD's ability to interfere in the implementation was limited. The NGO in this case was without sufficient prior knowledge or experience in this kind of work. Decisions - also regarding the use of NORAD-supplied resources - seem not always to have been fully appropriate to requirements.

3. Development Impact.

See chapters 5 and 6.4 in relation to chapter 3.

4. Plan vs reality, reasons for changes.

Programme started out as a small-scale fisheries undertaking, which was early reoriented towards industrial production of fishing boats and gear.

Planning at that stage seems to have been satisfactory. Later, however, the development of the Programme has not undergone any coherent planning. Decisions seem to have been taken very much on an ad hoc basis, influenced by changing external circumstances.

5. Technical experiences.

Boatbuilding (ch. 4.1), fishing gear production (ch. 4.2), fishing operation (ch. 4.3), fish processing and marketing (4.4).

The transfer of second-hand net manufacturing machinery from Norway to Sri Lanka seems to have been a good example of

transfer of appropriate technology.

Failure in recognizing the ambient conditions for specifying the refrigeration equipment (ch. 4.4).

6. Expatriate expert assistance.

Lack of definition of priority needs and tasks, and also of monitoring and reporting(ch. 5.1). These problems may also be seen in relation to point 1.

Apparent shortage in coherent supervision in some technical skills, and lack of technical advice in some key technological areas.

7. Commodity supply.

Supply of equipment and material used in the boatbuilding seems to have been very satisfactory (ch. 4.1).

In periods with import-restrictions in the recipient country, this form of support could have been utilized more in order to obtain appropriate equipment and material.

8. Training.

The activities of the training centre were discontinued at a much too early stage. They could e.g. have been made available to local fishermen buying equipment from CNDF, thereby preparing them for more rational use, maintenance and repair.

9. Collaboration with consultancy firms.

n.a.

10. Commercial collaboration.

Assembly production of long-lines on a contract basis for a Norwegian company has produced substantial employment and earnings, but the conditions of the relationship are insufficiently defined (ch. 4.2).

11. Use of research.

Various social research reports have given useful insight in the social structures of the target area and the social and

development problems confronting the Programme (ch. 2.2). This valuable information has not been fully utilized. The basic information contained in these reports ought to have been collected as a part of the planning and design stage.

12. The Evaluation.

Due to failure in establishing evaluation criteria in the planning stage, the evaluation has tried to derivate ideology, objectives and strategy on the basis of fragmented indications. This has been necessary in order to carry out any systematic evaluation (ch. 3).

The procedure for this evaluation exercise seems to have been successful. The preparatory phase with systematization of basic issues and relevant information, was decisive for setting up adequate terms of reference and subsequently for the rational work of the team. It could have rationalized the field work if some preparatory work had been carried out before the arrival of the complete team, e.g. by the national team members.

Regarding the composition of the team, the presence of team members representing broad development-oriented perspectives in addition to sectoral expertise was highly appreciated. It is not always the technical expertise per se that is most decisive in the evaluation phase. The presence of a team leader and a secretary with the responsibility for relating the evaluation to a systematic, objective-oriented discussion, and for coordinating the collection and presentation of information, also seems to have been an asset.

PROJECT PROPOSAL

CEY-NOR DEVELOPMENT FOUNDATION LTD

Introduction

1. The Cey-Nor Development Foundation Ltd (CNDF) is a private non-profit foundation financed by certain Norwegian donor agencies. As a result of an expansion programme undertaken since 1977, the continuing escalation in the price of raw material imports, the liberalisation policy of Government which has opened the market to competition from imported goods, and other factors, CNDF now finds itself in financial difficulties manifested primarily in in bank borrowings (Rs. 46.0 million at present) to meet working capital commitments. Financial measures to ease the present difficulties must be sought from government, the donor agencies or other financial institutions. To enable CNDF to do so it is necessary to equip itself with an economic viability plan for the next three years on the basis of which further financing can be considered. The examination of the activities of CNDF and the preparation of a viability plan would be based on the following terms of reference.

Terms of Reference

2. To examine the economic viability of the activities of CNDF and to formulate an economic viability plan for the next three years: and in particular to recommend

- whether, and if so what, activities should be terminated, suspended or postponed:

- whether, and if so what, activities should be continued and consolidated, and the nature scope and cost of such consolidation:

- whether, and if so what, additional activities should be undertaken in order to improve the

economic viability of the enterprise as a whole, and the nature scope and cost of such additional activities:

- a cash flow statement of the costs and benefits of the recommended plan:

- such other measures as are necessary to improve the economic viability of CNDF.

Activities:

Karainagar: boat-yard, fish processing, trawler fishing, ice-plant:
Gurunagar : fish net factory, long line production, ice-plant:
Kalpitiya : boat-yard, ice-plant:
Wennappuwa: fish net factory:
Matara : Polgahamulla fish net factory, Nilwella boat-yard and ice-plant:
Colombo : Mattakkuliya boat-yard, 5 retail fish stalls.

Methodology:

3. The methodology will consist of (a) examination and verification of the production and other facilities available, assessment of their capacity and possibilites of expansion, assessment of the market (both internal and export) for the produce, examination of government policies and action in so far as they affect the operations and their profitability and the availability of the necessary skills: (b) consideration of alternatives: (c) consideration of the economic implications of the alternatives and (d) preparation of an economic viability plan.

Personnel:

4. The assignment will be carried out by the following personell of Messrs Agroskills Ltd., Agricultural, Industrial, Management and Planning Consultants, Colombo.

Mr. D. Liyanage/Mr. C. Wiswasam, Directors of Agroskills and Management Consultants

Mr. Oliver Jayasinghe, Specialist in Fish Marketing,
Expert in Fisheries Cooperatives, former Marketing Manager Ceylon Fisheries Corp ration (Agroskills Consultant)

Mr. Willie Perera, Chief, Planning and Development Unit Ministry of Fisheries (back up Consultant)

Mr. C.B. Wettasinqhe, Financial Analyst (back up Consultant)

Mr. K. Thurairajah, Additional Manager Credit Dept., Bank of Ceylon, Colombo, (back up Consultant).

Duration

5. It is expected that the examination and reporting will take a period of eight weeks.

Costs

6. The total cost of the assignment, inclusive of 5 per cent Business Turnover Tax is Rs. 85,000 (Rupees Eighty Five Thousand only).