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BAY OF BENGAL PROGRAMME

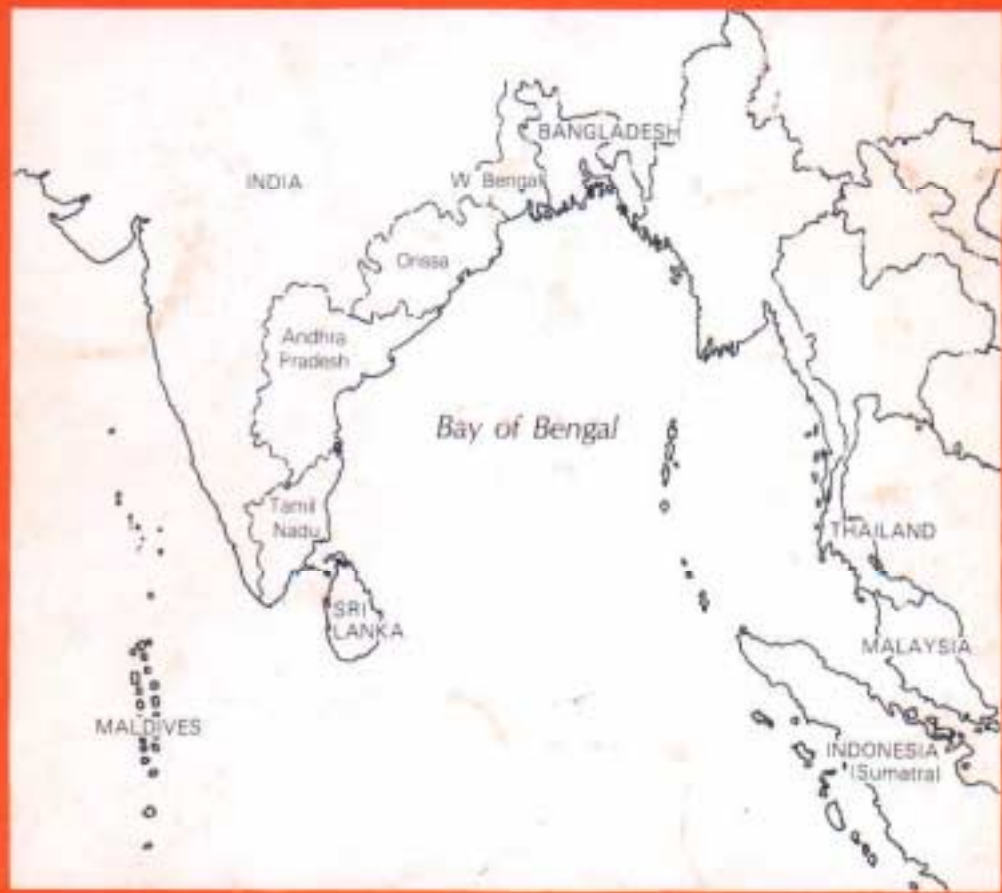
BOBP/REP/32

Development of Small-Scale Fisheries

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Bank Credit for Artisanal Marine Fisherfolk of Orissa, India



SWEDISH INTERNATIONAL DEVELOPMENT AUTHORITY



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

BANK CREDIT FOR
ARTISANAL MARINE FISHERFOLK
IN ORISSA, INDIA

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Executing Agency:

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This document describes and analyses a credit project for fisherfolk of Orissa, India, carried out from March 1982 to March 1986 with technical assistance from the small-scale fisheries project of the Bay of Bengal Programme (BOBP). Under the project, credit worth Rs. 6.5 million – in the form of boats, nets and bicycles for marketing – were distributed by nine nationalised banks to 2,500 fisherfolk households in Orissa's four coastal districts.

The document outlines the rationale and the philosophy of the credit project and discusses the preparatory work, the economics, the implementation and the results.

Dr. U. Tietze, BOBP Extension Training Officer, provided the expertise for the project. He worked in cooperation with extension officers and fisheries officials of Orissa, and the bankers who provided the credit.

The small-scale fisheries project of the Bay of Bengal Programme is funded by SIDA (Swedish International Development Authority) and executed by the FAO (Food and Agriculture Organization of the United Nations). It seeks to help improve the conditions of marine small-scale fisherfolk in member-countries; the immediate object is to develop, demonstrate and promote, through pilot activities, technologies and methodologies by which such betterment can be attained. The project covers five countries bordering the Bay of Bengal – Bangladesh, India, Malaysia, Sri Lanka, Thailand.

This document is a technical report and has not been officially cleared either by the Government concerned or by the FAO.

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SUMMARY

The BOBP-supported credit project in Orissa, India, was carried out from March 1982 to March 1986 in the state's four coastal districts — Balasore, Cuttack, Puri and Ganjam. The project aimed at establishing direct and enduring links between marine fisherfolk and banks; and at demonstrating that bank credit to artisanal marine fisherfolk can be not merely viable but also fully recoverable.

Under the project, 29 branches of nine nationalized banks disbursed during 1983-86 credit worth Rs. 6.5 million to 2,500 fisherfolk households. (These households represent 12 per cent of the state's artisanal marine fisherfolk and account for more than 60 per cent of Orissa's marine fish production). The loans were advanced without subsidy at 12.5 per cent interest, and were refinanced by NABARD.

The Orissa credit project was an outgrowth of an in-service training scheme conducted by BOBP between March 1982 and July 1983 for 15 marine fishery extension officers of the state. (See BOBP/REP/31, "In-Service Training Programme for Marine Fisheries Extension Officers of Orissa, India"). The scheme comprised three modules, including one on credit. The work undertaken during the credit module led to the credit project.

Preparatory work for the credit project encompassed several tasks and studies, in which the 15 extension officers shouldered major responsibility. But vigorous cooperation was extended by various banks and bank officers, by other government departments in Orissa, and by fisherfolk themselves. This work included:

- A study of the regular credit needs and the traditional credit sources of fisherfolk
- Discussions with bankers and fisheries administrators on the best approach to meet these needs
- A study of the costs and earnings of various craft-gear combinations and of the fish retail business
- Design of a lending programme and a banking plan on the basis of the costs-and-earnings studies
- Design of documents, such as a "village profile" and an "activity form", to help bankers assess and appraise loan applications
- Conduct of workshops and courses to impart training to bank and fisheries officers
- Negotiations with banks on designing a credit flow strategy

The preparatory phase of the credit project concluded with a seminar held May-June 1983 in Bhubaneswar. The first loan was disbursed in 1983, and the last one early 1986.

The banking operations demonstrated by the project tried to combine the principles of commercial banking (flexibility, timeliness and financial viability — no subsidies), with the principles of development banking — simplicity, borrower education and supervision.

Some salient features of the credit project were:

- A multi-purpose character (20 types of boats and nets and supporting activities were financed).
- Active participation and autonomy for loanees and banks: Fisherfolk individually and at a time of their choosing could approach the bank concerned, which was the only authority on whether to sanction or reject loan applications.
- Keeping down to the barest minimum the number of institutions involved (besides the bank, the only other institution concerned was the marine fisheries extension service, which assisted in sponsoring the loan applications, in their technical appraisal and in loan recovery).
- Technically sound bank formats and procedures for appraisal of loans.
- Quarterly review meetings at the district or state level, attended by representatives of banks, the fisheries department and NABARD, to monitor loan disbursement, recovery and refinance drawals.

The rate of loan repayment by fisherfolk was excellent (95 per cent). Other indicators of the effectiveness of the project were the short period between loan application and disbursement (three or four weeks) and productive utilization of loan assets (almost 100 per cent).

1. PREAMBLE

Before taking up the subject of this paper — bank credit for Orissa fisherfolk — it may be useful to dwell briefly on the current debate about the crisis in international agricultural credit and the relevance of this debate to agricultural and fisheries credit in the Bay of Bengal region. This will serve to highlight the macro-economic and policy implications of the BOBP activity, which policy-makers and planners may wish to consider.

a) International Agricultural Credit Crisis

Agricultural credit in developing countries, of which fisheries credit forms a part, has recently attracted critical attention in international and national conferences and publications. The widespread enthusiasm to stimulate rural development and agricultural growth by establishing a system of supply leading finance¹, that is, provision of cheap credit in a liberal way, has been replaced by a critical review of the results of this policy.

Some examples of the critical assessment of the cheap credit policy are the evaluation of small farmer credit programmes by the IDA (International Development Association) in 1972-73, the agricultural credit policy paper of the World Bank of 1975 and the FAG credit conference in Rome in the same year, which resulted in the Scheme for Agricultural Credit Development (SAACRED).

The various conferences and evaluations identified a number of constraints to agricultural credit, the more important ones being:

1. By adversely affecting the capital allocation function of interest rates, subsidized credit lowers growth rates of agricultural production and employment, rather than stimulating it.
2. Subsidized credit hampers the mobilization of rural savings, because low-interest loans are usually linked with low interest for savings.
3. A considerable amount of credit, particularly subsidized credit, does not reach the target group (the needy) and is not utilized for the intended productive purposes. Cheap credit instead attracts well-to-do farmers and traditionally influential and powerful groups who are able to manipulate the elaborate selection procedures which are usually associated with subsidized credit schemes.
4. Inappropriate lending procedures, particularly lack of timeliness and flexibility, hamper both lenders and borrowers.
5. Agricultural credit programmes everywhere have shown extremely poor recovery rates. This is especially true of cheap rural credit.
6. As a result of 2, 4 and 5 recycling of funds does not occur, and financial institutions depend more and more on subsidized loans and grants from international banks and development agencies (dependence v/s self-reliance). In the long run, subsidized credit leads to the decapitalization and demoralization of financial institutions -which in turn results in poor service.

The dependence on international financial institutions, however, becomes more and more problematic as the indebtedness of the developing countries reaches dimensions that endanger the solvency of many of the poorer ones.

While the volume of credit to developing countries has increased annually by almost 20 per cent, the share of concessional credit has declined from 36.7 per cent in 1971 to 20.9 per cent in 1982. During the same period the average rate of interest of external credit increased from 5 per cent to 11.3 per cent as a result of which the debt service increased by 25 per cent annually and the share of interest payment went up from 30 per cent to 46 per cent.²

1 Patrick, Hugh T (1966) Financial Development and Economic Growth in Developing Countries Economic Development and Cultural Change, Vol. 14, 1966.

2 Source: Jungsoo Lee: Long Run Debt Servicing Capacity of Asian Developing Countries: An Application of the Critical Interest Rate Approach. Asian Development Bank Economic Staff Paper No. 16, Manila, 1983, p. 41, as quoted by J. Stockhausen: Laendliche Finanzmarktpolitik im Rahmen hoher gesamtwirtschaftlicher Verschuldung in: Entwicklung und Laendlicher Raum, Frankfurt (Main), 1/86, p. 4

With externally determined interest rates, the long-run debt servicing capacity depends on the efficient utilization of capital and domestic savings. While the ratio of investment to GDP (Gross Domestic Product) has increased from 21.3 per cent during 1960/1970 to 25.8 per cent during 1970/1986, the rate of return on investment has declined from 26.8 per cent to 20.5 per cent. Even though the average annual savings greatly increased during the period, a negative trend can be observed from 1979 onwards.³

The negative impact of these developments on the solvency of developing countries is shown by the calculation of the critical interest rate, which indicates the maximum interest rate payable for external credit without further straining the relationship between external liabilities and Gross National Income. On the basis of the marginal savings quotas, marginal capital coefficient and economic growth rates of the period 1974/81, the critical interest rate for south Asian countries is 3.2 per cent and for South-East Asia 7.8 per cent (at an initial savings quota of 5 per cent)⁴, rates which are well below the actual rates of interest charged on external credit presently and in the foreseeable future.

With the growing indebtedness of most developing countries and the unsatisfactory performance of their agricultural credit institutions, increased efforts are needed by the developing countries to strengthen efficient capital utilization as well as domestic capital formation through savings. The experience with fisheries credit in the countries bordering the Bay of Bengal is very similar to the situation briefly outlined above.

Loans for fisheries have been provided at subsidized interest rates together with a subsidy on the capital. Initially fisheries credit was channelled through government departments or government finance corporations, which usually were not properly equipped to carry out the task. The beneficiaries of these loan schemes very often did not belong to fishing communities and if they did, not to the poor among them. Recovery was extremely poor. Later, banks were asked to play a role in fisheries finance and refinance and credit guarantee arrangements were made through central banks or newly established institutions. However, the interest spread between refinance and on-lending frequently did not cover the cost of lending and the loan recovery remained poor, the reasons being lack of economic viability of loan proposals, inappropriate lending and recovery mechanisms and wilful default of loanees. In an increasing number of cases loans were written off, as a result of which the general motivation to repay loans deteriorated further.

b) Present System of Small-Scale Marine Fisheries Finance in India and Scope for Improvement

Changes in Economic Role of Fisherfolk and Growth of Financial Market: Stimulated by a growing demand for fish (for domestic consumption and for export) the artisanal fishing economy – once oriented towards subsistence – has developed into a market oriented economy. Artisanal marine fishing still accounts for the major part of India's total marine fish production from the east coast, even though the number of mechanized boats has been steadily increasing. A wide variety of fishing methods - both active and passive – are employed, exploiting pelagic as well as demersal resources, though limited to the inshore ranges of the continental shelf. As regards fishing equipment, natural fibres and materials have been replaced by synthetic ones, wherever technically feasible and economically viable. To cater to the financial needs of the growing fishing economy, a system of informal credit has developed.⁵

In Orissa, a sizable part of fisheries finance is linked to marketing and production. Finance for craft and gear as well as working capital requirements of fishermen, boat owners and operators is frequently provided by fish merchants. Merchants also advance loans to fish suppliers for consumption needs during lean seasons, for social ceremonies and for expenses connected with accidents and illnesses. These advances establish a link between production and marketing in the form of the borrowers having to sell their catches at pre-fixed rates to their creditors.

³ World Bank: World Development Report 1984, p. 28.

⁴ S. Lee: The External Debt-Servicing Capacity of Asian Developing Countries. In: "Asian Development Review", 1983, No. 2, p. 79, as quoted by J. Stockhausen: Laendliche Finanzmarktpolitik im Rahmen hoher gesamtwirtschaftlicher Verschuldung, in: Entwicklung und Laendlicher Raum, Frankfurt (Main), 1986, p. 4.

⁵ For Orissa, this system has not been studied yet. A detailed study has been carried out in three fishing villages in Kerala. See: Platteau, Murikan, Delbar: Technology, Credit and Indebtedness in Marine Fishing, Delhi 1985.

In principle, this arrangement suits the industry because of scattered landing sites and fluctuating supply and demand situations. In practice, however, and this applies particularly to isolated and remote landing sites, fishermen are frequently bound to sell their catch at rather low rates, because of the lack of other alternatives and because of lack of knowledge about prevailing fish prices.

The role of fish merchants in fisheries finance seems to have declined in recent years, with auctions becoming the most important means for disposal of fish. Only in the case of exportable marine products, such as prawns, do fixed sales/procurement arrangements still prevail.

Owners of fishing craft and gear pay advances to crew members to ensure their participation during a particular season. They also extend loans to crew members to meet expenditure on social ceremonies, in cases of accident and illness, and towards food during the off-season.

Apart from these sources of finance (which are part of the marketing and production arrangements), professional moneylenders (who advance money against securities and at high rates of interest) also play a certain role. The services of professional moneylenders are available more often in larger fishing villages situated close to agricultural villages or rural towns than in small and remote fisherfolk hamlets, where they are sometimes non-existent.

Other sources of finance are relatives, neighbours, friends and chit funds, which may be described as local savings and credit clubs. In smaller villages, which do not regularly attract fish merchants from outside, these sources are the most important ones. Interest is charged for such loans (except for the chit funds) and they are extended for all kinds of purposes. The amount of credit available from this kind of loan is very small and that too only for a short term. Even though professional moneylenders can lend larger amounts against sufficient security, their loans once again are mainly for short term purposes. Thus the informal credit market is not able to meet medium and long-term finance requirements for productive investments. It is even much less able to finance infusion of innovative technology such as motorized boats. No wonder very few fishermen in the small-scale sector own mechanized boats.

These shortcomings in credit were the main reason institutional finance entered the scene in Orissa. They first did so through cooperative banks. Apart from cooperative banks that financed both non-mechanized and mechanized craft and gear, government agencies such as the State Finance Corporation and the fisheries department also came into the picture, mainly funding the acquisition of small-scale mechanized trawlers for catch of exportable prawns. Branches of commercial banks and regional rural banks funded marine fisherfolk in a rather limited way through government-sponsored anti-poverty and rural development programmes, which usually included a capital subsidy, or in an even more limited way, under their priority sector lending programmes.

Though detailed figures are not available, it is assumed that the share of informal credit sources is much larger than the share of the institutional sources of credit. Individual savings are now mobilized only in the informal sector through chit funds.

Savings are also deposited in earthen pots and invested in gold. The institutional sector has not mobilized deposits on any substantial scale so far.

Constraints of Institutional Fisheries Finance: Until very recently, growth processes in rural credit had left the class of artisanal marine fisherfolk virtually untouched. The traditional cooperative system did not develop well among the fisher-folk and did not emerge as a viable form of organization. Commercial banks, with very few exceptions, did not build up the required expertise, and did not focus on artisanal fishing⁶. Reasons might have been the remote location of fishing villages and the low social status of fisherfolk and fishing when compared to agriculture etc.

Commercial banks, together with the State Finance Corporation, financed small mechanized trawlers — the loans mainly given to persons who did not belong to the fisherfolk community. Loan recovery was disappointing.

Only during the past few years have artisanal fisherfolk in a few locations been included in credit schemes under rural development programmes.

⁶ The situation as observed by Lawson in 1972 has *not* changed significantly since then: "It must be noted that most new loan schemes favour the already established commercial fishery and do little to help the small-scale artisanal fishery". Lawson, R.M., Report on Credit for Artisanal Fishermen in South-East Asia, FAO Rome, 1972, p. 35.

However, rural credit schemes under the IRDP (integrated Rural Development Programme) have suffered the following shortcomings.

1. *Limitation of target group*: Finance under IRDP aims only at the poorer sections of the fisherfolk who do not own any gear or craft and whose income is below Rs. 3000 a year. Another constraint is the limited availability of subsidy. Even among those who fall under the stipulated income limit, only a minority can be covered by institutional credit because credit has to be combined with subsidy, the availability of which is naturally limited.
2. *Dependence on external resources/lack of self reliance*: There is no planning for recycling and reinvestment of funds and for deposit mobilization. A viable fisheries financial market is not being developed.
3. *Lack of proper coordination among various agencies*.. The elaborate institutional framework within which the various agencies are to function almost destroys their autonomous character. Results: apathy in asset creation or recycling of funds, and delays in sanctioning and disbursing loans. Examples are the present system for identifying loan recipients and for selecting suppliers through purchase committees. In both cases, intervention by local leaders and middlemen prolongs the process. Criteria other than that of productive loan utilization influence the appraisal of applicants. As a result, loan recipients are frequently neither able nor willing to repay the loans. In consequence, banks become reluctant to extend further loans.
4. *Single-purpose character of credit scheme/at scheme approach*.. Financial institutions are supposed to meet the entire needs of the target group. But in practice only a single type of asset is sponsored, hardly any supporting or peripheral activities. This is inadequate even for target groups which do not own any production asset. It is wholly inappropriate for marine fisherfolk who already own and operate a variety of productive assets.
5. *Social welfare character/lack of participation of target group*: A high dose of subsidy ranging up to 50 per cent gives the credit scheme a social welfare character rather than one of viable loans. Further, rural credit schemes often have the drawback of mass loan programmes. The loanees do not play an active part in getting a loan. They do not approach a bank by their own decision and intention, they have to wait until they are selected by officers or committees.

2. INTRODUCTION

There are approximately one million marine fisherfolk who live on the east coast of India. They operate small fishing craft (usually non-motorized) from scattered landing sites on open beaches and in river mouths. These fisherfolk contribute 58 per cent of the total marine catch of the east coast states.

Steadily growing demand for fish and prawns (for domestic consumption and for export) has transformed the artisanal fishing economy — once oriented towards subsistence — into a market oriented economy. The financial requirements of marine fisherfolk are now catered to by moneylenders and middlemen (who impose unfavourable conditions) and to a limited extent by cooperatives (which encounter a number of problems regarding loan repayment and utilization, availability of subsidy etc.).

Commercial and regional rural banks have hitherto financed marine fisherfolk only to a very limited extent, usually in the context of subsidized rural development programmes. Because of poor loan recovery, however, they are reluctant to extend further loans.

The third FAO Technical Consultation on the Scheme for Agricultural Credit Development (SAACRED), held in September 1985 in Rome, stressed the importance of strengthening the viability of rural banking institutions — to be brought about by efficient banking, recovery of loans, and mobilization of rural savings.

Donors were asked to reorient their focus toward the development of sound banking institutions. necessary for self-reliance and self-sustained development, instead of limiting their interest to the delivery of cheap agricultural credit, which all too often has further increased the dependence and indebtedness of developing countries.

One of the aims of the BOBP credit project was to assist Indian banks develop efficient banking operations with regard to artisanal marine fisheries.

The development of efficient banking operations was seen as a means to introduce fisherfolk to banking habits. That would help them change their hand-to-mouth attitude and adopt a planned way of living: educating their children, acquiring their own fishing craft and gear etc. Since the artisanal fishing economy has become market oriented, with higher levels of cash earnings, many families no longer lead a hand-to-mouth existence: resources are available for a better planned life, which will help them benefit from technological innovations

Approach and General Features

The project activity aimed at extending to artisanal marine fisherfolk the short-term and term lending schemes of coastal branches of commercial and regional rural banks, thus developing a nucleus of a new group of bank clients.

The project sought through this aim to promote the development of a viable institutional financial market for small-scale marine fisherfolk of Orissa.

The financial market to be developed should ultimately offer deposit and investment facilities as well as credit facilities for various purposes (including loans for consumption) through recycling/reinvestment of financial resources generated in the small-scale marine fisheries sector. The institutional financial market should also have links with the existing non-institutional financial sector by providing deposit facilities for village chit funds (savings and credit clubs), meeting working capital requirements of boat owners (such as wage advances to crew members).

In order to achieve its immediate objectives (to get coastal banks to include artisanal marine fisherfolk in their short-term and long-term lending programmes) the following targets were pursued.

**Table 1:
TARGETS OF FISHERIES CREDIT PROJECT**

1. Study of the economics of traditional non-mechanized fishing craft/gear combinations and small-scale fish retail business.
2. Design of comprehensive lending programme for non-mechanized fishing craft and gear and small-scale fish retailing.
3. Design of appropriate bank formats and procedures for identification, appraisal of individual loan applications, loan disbursement, loan recovery, follow up and monitoring.
4. Design of banking plan covering all four coastal districts of Orissa.
5. Arrangement of refinance for the participating banks.
6. Technical training of bank officers in marine fisheries and on new formats and procedures.
7. Training of fisheries officers in banking.
8. Demonstration of viability of approach and lending programme by implementing banking plan.

The inclusion of small-scale marine fisherfolk in the short-term and term lending of coastal bank branches on a self-sustained basis, not depending on financial support from outside, was to be achieved by incorporating principles like flexibility/need orientation, timeliness, simplicity, borrower education/follow-up into the lending programme and banking plan, thereby maximizing the usefulness of credit and its positive economic results. The principle of flexibility/need orientation referred to the genuine multi-purpose character of the lending programme and an active participation and autonomy for loanees and banks, which meant that fisherfolk individually and at their own choosing could approach the bank concerned directly or through the fisheries extension officer, while the branch manager is the only authority to sanction or reject a loan.

The principle of *timeliness* refers to a short term span (not exceeding four weeks) between loan application and loan disbursement. The principle of *simplicity* refers — apart from formats and procedures — to keeping the institutions involved in disbursing a loan to a minimum. In the scheme, the only other institution involved, besides the bank, is the fisheries extension office, which assists in the sponsoring and technical appraisal of loan applications and loan recovery.

Capital subsidy and subsidized interest rates (negative or neutral in real terms) were intentionally excluded to:

- ensure that those who applied for loans had the best opportunity to use them in a productive manner and thereby to further economic growth (resource allocation function of interest rate).
- avoid dependence on outside resources and guarantee a self-sustained development.

The role of BOBP in preparing and implementing the fisheries credit scheme consisted in designing the lending programme and bank formats and procedures; training of bank and fisheries officers; and coordinating the monitoring of loan disbursements and loan recovery. The actual lending operations as well as monitoring at the field level were carried out by the participating banks, which were supported by the fisheries extension service.

All funds advanced to fisherfolk were the banks' own funds, refinanced by NABARD. BOBP did not play a guarantor's role.

As a first step towards the development of a comprehensive institutional financial market, the fisheries credit project limited itself to the most urgent financial needs of the fisherfolk which were term loans for productive assets. Apart from this, short term loans for retailing fish were financed.

An audio-visual to promote deposit mobilization was prepared and equipment distributed to participating bank branches. It is hoped that after successfully demonstrating the present lending programme and after gaining experience and confidence, coastal bank branches will extend their services to fisherfolk and that they will respond positively, so that a financial market for small-scale fisheries develops. Such a market will encompass credit for motorized fishing craft to artisanal fishermen and special campaigns to mobilize deposits. Such a market might qualify for development assistance in the area of institution building.

3. PREPARATORY WORK

The preparatory phase of the activity extended from March 1982 to June 1983. During this period the following work was undertaken.

1. Enquiry into credit needs and credit sources of the artisanal marine fisherfolk in Orissa and an assessment of the present role of institutional finance.
2. Discussions with bankers and fisheries administrators and selection of approach to be followed.
3. Enquiry into the economics of artisanal fishing, viz. costs and earnings of various craft and gear combinations and of the fish retail business.
4. Design of lending programme.
5. Design of documents to help assess and appraise loan applications, such as the 'village profile' and the 'activity form'.
6. Conduct of workshops and training courses to impart training to bank and fisheries officers.
7. Negotiations with banks, design of credit flow strategy.

Besides the preparatory work especially undertaken in the context of the fisheries credit project, two documents prepared earlier were extensively used:

- a) Artisanal marine fisheries in Orissa⁷ — a techno-demographic study of Orissa's artisanal marine fisheries, which presents a detailed picture of the distribution of fisherfolk, fishing craft and gear, as well as of regional imbalances.
- b) Traditional marine fishing craft and gear of Orissa⁸ — an inventory of fishing craft and gear.

7 BOBP/WP/29: Artisanal Marine Fisheries of India: A Techno-Demographic study M H. Kalavathy and I.. Tietze, BOBP, Madras, India, 1984.

8 BOBP/WP/24: Traditional marine fishing craft and gear of Orissa. P. Mohapatra, Madras, India, 1986.

In the following paragraphs, the preparatory work is described more in detail.

Enquiry into credit needs and credit sources conducted by the 15 extension officers of Orissa. Assessment of the present role of institutional finance. The enquiry and the assessment revealed a situation similar to that discussed in the Preamble.

Institutional finance in Orissa has so far been extended through the State Finance Corporation and fishermen cooperative mainly for the acquisition of mechanized trawlers and gillnetters, the beneficiaries in most cases being people other than fishermen. Loan utilization and repayment have in many cases been unsatisfactory. Traditional fishermen had secured bank funds only in connection with subsidy schemes, which frequently did not meet real credit needs, Loan recovery had been unsatisfactory, too. The role of the fisherfolk had been passive — that of gratefully receiving benefits. A direct two-way link between banks and traditional fisherfolk had so far not been established.

As a result, credit was obtained mainly from professional money lenders, fish merchants, boat owners and relatives. The enquiry showed that there were different purposes for which credit was used: fishing craft and gear, fish marketing and processing, agriculture, consumption during the off-season, house construction, social ceremonies, accidents, illness, unpredictable social commitments etc. Fisherfolk generally complained about scarcity of credit and also about high interest rates — particularly when it came to the comparatively large amounts they needed to buy craft and gear.

According to the enquiry, the vast majority of the fisherfolk did not know that it was possible to get a loan from a bank. Those who had heard about it complained of long drawn-out procedures, late disbursement, the necessity of collateral etc. Bank managers said that they had no competent staff to evaluate the financial viability of schemes for traditional fisherfolk and also not enough field staff to establish and maintain contact with them.

Discussion with bankers and fisheries administrators followed the initial inquiry: It was agreed that coastal branches of commercial and regional rural banks would extend credit to fisherfolk through their direct non-subsidized priority-sector lending programme. The BOBP's approach to the credit project was also agreed to.

Enquiry into economics of artisanal fishing, costs and earnings of various craft-gear combinations and of the fish retail business: During the preparatory phase, a comprehensive lending programme for artisanal marine fisheries in Orissa was designed, which covered 20 different types of non-mechanized craft and gear and the fish retail business. It provided the technical specifications of each craft and gear with details of its life span; period, area and mode of operation; and sharing system. It also listed capital costs, annual recurring expenses, annual income and surplus, expected annual rate of return on investment and expected net value added and suggested appropriate repayment schedules. The scheme economics of the lending programme is described in Annexure 1.

Technologies such as motorized beachlanding craft, motorized gillnetters or motorized country craft were not included in the lending programme. Reason: motorized boats required substantially higher funding and therefore special financial arrangements. Extending loans for motorized boats requires a separate lending programme, to be introduced perhaps at a later stage, once sufficient positive experience has been gained by the banks. The same comment applied to loans for processing and fish marketing (excluding retailing).

Some details of the lending programme are set out below:

- Term (period of repayment)
- Net surplus minus repayment
- Number and time of instalments/repayment towards principal and interest

Term [period of repayment]: NABARD refinances only long-term loans (for three years and above). So the bank credit to Orissa fisherfolk would have to be for long-term loans. Secondly, the term of the loans should not for obvious reasons ---- exceed the lifespan of the asset. Thirdly, the term of the loan should be such that the net surplus minus repayment is sufficient to sustain the borrower's household; it would then fulfill the criteria for priority sector lending.

For artisanal marine fishing in Orissa a term of four years for fishing craft and a term of three or four years for fishing gear best suits the requirements listed above. But, since it was desired by the participating banks, a uniform term of 4 years was used.

As far as repayment towards the principal and the interest is concerned, the principle of 'equated' instalments was agreed to. Equated instalments, for repayment towards both interest and capital, make loan recovery simpler whenever a term is specified for the loan and more easily understood by the borrower. Moreover, it is different from the non-institutional system of credit where often only interest has to be repaid regularly while the principal can be kept for an unspecified term. The longer the duration of these loans, the more they benefit the money lenders, middlemen, fish merchants and boatowners who earn their profits through the high interest rates and the binding effects of the loan which allow them to buy the catch at pre-determined low rates.

When fixing the number and timing of instalments, the fluctuations in earnings were taken into account. Ten equal annual instalments were fixed, of which three each are to be paid in the first, third and fourth quarter; the rest is to be paid in the second quarter (in which the lean season falls)⁹.

Design of documents to help assess and appraise loan applications:

The village profile and the activity form were designed to give the bank all the data needed about loan applicants, their environment and their financial status. These forms were usually filled in by the extension officers, because most of the fishermen were illiterate.

The village profile form, when correctly filled in, is a comprehensive factsheet of the village. It contains ethnographic data; socio-cultural data on such factors as religion, the major castes, literacy rate, village festivals etc; data on the village infrastructure — transport, water and power facilities; the craft and gear used; preservation and processing facilities; annual fish catch; the type of traders who market the species; the secondary occupations of the fisherfolk.

The application/activity form contains details of the craft, gear and other assets already owned by the applicant. The purpose of the loan, the amount of the loans and the number of instalments in which it will be repaid; the way the new requisites being bought will be used; the size and composition of the family; health and monthly consumption expenditure -all these are specified. The village profile and activity forms are reproduced in Annexures 3 and 4.

While testing the newly designed application and activity forms, the fisheries extension service identified the following areas as requiring credit. They are, in the order of priority:

1. Replacement/repair of worn out or damaged craft/gear.
2. Supplementary craft/gear to achieve fully equipped craft and gear combinations.
3. Additional craft/gear in order to diversify fishing effort.
4. First acquisition of craft or gear.
5. Fish marketing and other ancillary activities.

Conduct of workshops and training courses for bank and fisheries officers:

On completing the enquiry into credit needs and sources, a 12-day training course on fisheries finance was conducted for fisheries extension officers during March/April 1982. (Course programme in Annexure 5).

Apart from training officers in methods of extension work and discussing the findings of the enquiry together with senior bank officers, the fisheries extension officers were briefed about the functioning of banks and particularly about the role of banks in financing rural development programmes.

In July 1982, some field workshops were held, during which the fisheries extension officers learnt how to use newly designed village profile forms, application forms and activity forms. It was agreed that the forms would be tested with a sample of 500-600 fisherfolk households from all coastal districts of the state. During the workshop, the extension officers were trained in cost-benefit analysis for fishing craft and gear, and also on how to prepare bankable schemes. It was agreed that after the workshop, the trainees would analyze the costs and benefits of the various fishing craft and gear to be included in the lending programme and draft bankable schemes.

⁹ The repayment schedules are listed in annexure 2

In August 1983, a 3-day workshop was conducted to review the work assignments given during the July field workshops. Improvements were incorporated on the forms, as suggested by the extension officers. Cost-benefit calculations and bankable schemes prepared by the trainees were discussed, and further improvements to be made agreed upon. A timetable was adopted for finalizing the bankable schemes for all districts and for selecting the bank branches to participate in the loan disbursements. Extension officers were briefed on how to use the forms for technical appraisal of loan applications. The further work assigned to the fisheries extension officers was completed by March 1983 and reviewed during another round of field workshops. Subsequently, the first loan proposals were forwarded to banks.

Negotiations with banks and design of credit flow strategy:

Discussion with banks about their participation in a pilot credit scheme commenced after the first training course of March/April 1982. Representatives of several banks agreed in principle to participate in a pilot credit scheme once a lending programme and appraisal formats and procedures had been devised.

On completion of forms and bankable schemes for all coastal districts of Orissa, a meeting was held in March 1983 with senior officers of banks suggested for participation in the credit scheme by the fisheries extension officers.

The bank representatives expressed the view that the new approach might lead to better utilization of credit; they promised to give the required headquarters clearance to branches that were to participate in the credit project and also to monitor their functioning. At this stage, 15 branches of six banks (both commercial and rural) had agreed to advance approximately Rs. 2.5 million to about 500 households in 18 villages.

The strategy adopted at this stage was to advance loans for various purposes:

- (1) increasing the number of traditional craft and gear
- (2) helping to replace traditional craft and gear
- (3) meeting working capital requirements for small-scale fishing, fish marketing and processing; repair/maintenance of traditional craft and gear
- (4) consumption loans and small loans for supportive and allied activities
- (5) large loans to finance technical innovations, such as motorized beachlanding craft, motorization of country boats.

Taking the pilot project as a first step, the strategy proposed to concentrate on purposes 1, 2 and 3 and channel the funds through the general banks' lending schemes (priority sector lending schemes).

Workshops and training courses and negotiations with banks.

The preparatory phase of the fisheries credit activity concluded with a seminar held May/June 1983 in Bhubaneswar. Apart from fisheries extension officers and headquarters staff of banks and the fisheries department, the seminar was also attended by managers of bank branches slated to participate in the credit programme, which had already received the first loan applications sponsored by the fisheries department.

After discussing the lending strategy, the schemes proposed for finance and the forms to be used, appraisal of loan applications etc., the seminar highlighted, among other things, the following advantages of their proposed new role when compared to their earlier role:

- Banks as active and competent financiers (credit/no subsidy) v/s banks as passive suppliers of complementary loan amounts for subsidy schemes of other institutions.
- Development of new groups of bank customers/introduction of banking habits to fisherfolk v/s one time disbursement of loan cum subsidy.

The seminar also discussed difficulties and delays in clearing loan applications already forwarded to bank branches. To overcome these, it was suggested that a NABARD-refinanced banking plan be prepared to lend more authority to the credit scheme and thus facilitate the various clearances required, and also enforce the necessary disciplines on participating banks. In addition, the banks' advances would be refinanced at an interest spread of 4.5 per cent. It was decided to draft a NABARD scheme on these lines.

Glimpses into the Orissa Credit Project



Why do fisherfolk need credit, and whom do they usually approach? A survey of traditional credit needs and sources of fisherfolk was undertaken by Orissa's marine fisheries extension officers (left). They also did field work (below) on the costs and earnings of traditional craft-gear combinations. (See Annexure 1). The data obtained from such studies was crucial for designing a viable credit project.





The fisherfolk, and the assets they acquired through the credit project. Above: Fishing craft (kattumarams) for Puri fishermen. Below, left and right: Nets, and bicycles for marketing. Director of Fisheries L. Kindo is seen in the picture at left.



4. FORMULATION OF NABARD SCHEME AND PREPARATION OF BANKING PLAN

As stated above, the desire to include NABARD in the credit scheme was first expressed during the seminar held in May/June 1983, which marked the end of the preparatory phase of the fisheries credit activity. For regional rural banks, the availability of refinance was essential because of severe fund constraints; but commercial banks did not really require refinance for a relatively modest lending programme like this one.

However, it was generally felt that the participation of NABARD which implied a banking plan with disbursement targets drawn up for each participating bank and formally accepted by them, would lend the credit programme more authority, and also facilitate coordination and monitoring of loan disbursements and recovery.

At the seminar, it was agreed that a proposal for refinance would be forwarded to NABARD by the Directorate of Fisheries, which was to aggregate various proposals to be prepared by the fisheries extension officers in cooperation with the local bank branches. On the basis of the proposal received by the Directorate of Fisheries, NABARD would draw up lending programmes for each district with reference to the lending programme already prepared and combine them into a uniform banking plan.

As a first step, BOBP briefed fisheries extension officers on how to prepare NABARD proposals and furnished them with formats, to be completed by them in cooperation with the participating bank branches in their jurisdiction, and then to be forwarded to the Directorate of Fisheries.

Before a NABARD scheme could be sanctioned, the problem of margin money had to be solved. NABARD representatives stipulated that the loanees contribute 5 per cent of the total loan amount -thereby putting fishermen on par with small farmers. The margin was to be provided either as down payment or, in the case of scheduled castes, as a soft loan by the Scheduled Caste Finance Corporation — the usual practice under subsidized loan schemes.

Discussions with the Orissa Scheduled Caste Finance Corporation were held in July, and the Corporation agreed to provide margin money. However, it turned out that only the Oriya fisherfolk were listed as scheduled castes and not their Telugu counterparts who live in the southern part of Orissa. In order to have a uniform arrangement and also because it was felt that the 5 per cent down payment would not be a real problem for potential marine fisherfolk loanees (and might even help to channel the loans to those who had the best prospects of utilizing them efficiently), it was finally decided not to avail of the offer of the Scheduled Caste Finance Corporation.

Even though the NABARD office in Orissa had the authority to sanction the envisaged credit scheme, advice and approval was sought and obtained from its central office in Bombay, because of the scheme's innovative character. Discussions were held in Bombay early September with NABARD officers in charge of fisheries finance and the eastern zone of India respectively. The proposed scheme was generally agreed to and timely scrutiny and approval of the scheme was assured, in case the Orissa office of NABARD wanted to have it cleared at the central office.

NABARD schemes for all coastal districts were finalized and formally forwarded by the Directorate of Fisheries to NABARD, Orissa, at a seminar held in April 1984 — almost one year after the end of the preparatory phase of the project. The seminar was conducted to review the first round of loan disbursement as well as the loan recovery.

Even though the refinance proposal was formally forwarded a whole year after the end of the preparatory phase and 10 months after the commencement of the loan disbursement, it was well in time because a NABARD scheme includes all finance extended up to one year before submission of the refinance proposal. This rule allows banks the advantage that they can start lending from their own resources and observe the actual demand, loan recovery etc. before committing themselves to a large-scale lending programme over 2-3 years with set targets. The original scheme forwarded to NABARD proposed a total amount Rs.5.8 million lent through 21 branches (belonging to 7 banks) during 1983-86. The district-wise allocation was as follows: Balasore district: Rs. 1 .1. million; Cuttack district: Rs. 1.4 million; Puri district: Rs. 1.2 million; Ganjam district: Rs.2.1 million. Later, more banks and branches were added and the financial allotments increased.

4.1 Terms and Conditions Stipulated In the NABARD Scheme and Arrangements for Monitoring and Evaluation.

Apart from specifying the physical arrangements and financial lending programmes in the form of the banking plan, the NABARD scheme stipulated a number of terms and conditions — some common for all NABARD programmes and some specially adopted for this credit scheme. The latter concerned commitment charges, unit costs, margins, repayment period, rate of interest, security/insurance, loan disbursements, meeting of short-term credit requirements, and evaluation and maintenance of accounts.

Commitment Charges: In case a bank fails to draw refinance as indicated in the banking plan, the bank has to pay commitment charges on the shortfall of drawals at 0.3 per cent per annum at the end of each year.

Unit Costs: The financial outlay, bank loan and refinance have been worked out on the basis of the average unit cost with respect to each investment e.g. type of craft and gear. The unit cost in each individual case, however, is to be arrived at by each bank branch for the purpose of calculating the loan amount with reference to actual cost estimates on the basis of technical plans, invoices, quotations, etc.

In case the loans advanced are lower than the estimated actual investment cost, banks have to ensure that borrowers have enough resources to meet the balance amount. In case the loan amount exceeds the maximum cost stipulated in the banking plan, the bank has to justify the increase with supporting material and obtain NABARD's approval.

Margins: With regard to margins, fisherfolk were classified as 'small farmers' and were to contribute a margin of 5 per cent of the total financial outlay.

Repayment Period: The repayment period for all types of craft and gear was fixed as four years without a grace period. Repayment of refinance by the participating banks to NABARD is supposed to coincide with agreed dates for collection from ultimate borrowers. Schedules for repayment of refinance are to be drawn up at the time of each drawal. Thus if loans fall due for repayment during the first half of a year the refinance for the loan should also be repaid by 31 July. Refinance for loans due for repayment during the second half of a year should be made before 31 January.

Rate of Interest: The NABARD scheme entitled participating banks to avail themselves of refinance at 6 per cent or 8 per cent interest depending on whether the borrowers were classified as 'small farmers' or 'others'. The corresponding on-lending rates were 10 per cent and 12.5 per cent respectively. Thus, the interest spread was 4.5 per cent for borrowers classified as 'others' and only 4% per cent in case of borrowers classified as 'small farmers'. This is why almost all banks preferred to classify the fisherfolk as 'others'. This category is not used with regard to margin money, which is why borrowers were classified as small farmers with respect to their own contribution to the financial outlay.

Security/Insurance: The NABARD scheme committed participating banks to follow the guidelines issued by the Reserve Bank of India (RBI), which insists on security for all loans exceeding Rs. 5000. The cost of most of the fishing craft exceeded this limit. Banks were usually satisfied with the hypothecation of fishing craft and a third party guarantee. Landed property or gold was not offered as security any time. Even though the NABARD scheme stipulates that adequate insurance cover should be obtained, this was not possible, because no insurance agency is yet prepared to insure artisanal fishing craft and gear.

Disbursement of loans: Loans are to be disbursed in kind, and banks are directed to pay the suppliers of equipment directly.

Who should supply the boats or the brand of twine or fishing gear for which credit is being provided is to be decided in consultation with the beneficiary and the fisheries extension officer concerned.

Loans are to be disbursed in clusters to facilitate effective supervision of the implementation of the banking plan.

Meeting short-term requirements: In addition to the term loans stipulated in the banking plan, banks shall either themselves provide short-term credit for the borrowers, availing themselves of term loans, or satisfy themselves that such credit is provided by other agencies.

Evaluation and maintenance of accounts: Regarding the evaluation of the scheme, it is stipulated that NABARD may charge a once-for-all evaluation fee of 0.5 per cent of the cost of investment. The banks, however, may waive the fee if desired, with the concurrence of NABARD. To facilitate the monitoring of the scheme, banks have to maintain separate accounts. The fisheries department and the banks are to periodically monitor the progress of the scheme and report to NABARD.

On the role of the fisheries extension officers, the NABARD scheme says that the necessary technical guidance to beneficiaries will be provided by the Fisheries Extension Officers, who are responsible for identifying the beneficiaries, preparing feasibility reports, procuring boats and nets and monitoring the fishing operations.

5. Banking Plan

On the basis of the proposal forwarded by the Directorate of Fisheries, a banking plan was evolved by NABARD. The banking plan was formally sanctioned in July 1984 at a meeting convened by the Director of Institutional Finance of Orissa. The plan is shown below:

Table 2
BANKING PLAN, BANK-WISE
(All figures in lakhs of Rupees, 1 Lakh = 100,000)

Sl. no.	Name of bank	District	Phasing	Total financial outlay	Down payment at 5%	Total financial assistance	National bank's refinance at 90% (NABARD)
1	2	3	4	5	6	7	8
1.	State Bank of India	Balasore	1984-86	3.550	0.177	3.373	3.035
		Cuttack	-do-	0.895	0.045	0.850	0.765
		Ganjam	-do-	13.570	0.678	12.892	11.063
		Puri	-do-	9.130	0.456	8.674	7.806
				27.145	1.356	25.789	22.669
2.	United Commercial Bank	Balasore	-do-	2.150	0.107	2.043	1.839
3.	United Bank of India	Cuttack	-do-	2.275	0.111	2.164	1.948
4.	Canara Bank	Puri	-do-	1.620	0.080	1.540	1.386
		Ganjam	-do-	4.990	0.250	4.740	4.266
		Cuttack	-do-	0.895	0.045	0.850	0.765
				7.505	0.375	7.130	6.417
5.	Andhra Bank	Ganjam	-do-	3.250	0.162	3.088	2.779
6.	Bank of India	Cuttack	-do-	0.895	0.045	0.850	0.765
7.	Balasore Gramya Bank	Balasore	-do-	9.500	0.475	9.025	8.123
8.	Rushikulya Gramya Bank	Ganjam	-do-	6.010	0.300	5.710	5.139
9.	Cuttack Gramya Bank	Cuttack	-do-	6.580	0.330	6.250	5.625
Grand Total				65.310	3.261	62.049	55.304

Besides the seven banks, Bank of India and Andhra Bank also joined the scheme during 1984. The number of bank branches touched 24 and increased over the 21 proposed in May 1984. By the end of the disbursement period (in June 1986), the number of branches had increased further to 29.

When compared to the lending programme prepared originally, a few items were omitted and costs in some areas were revised. The banking plan finally adopted is listed in Table 2 — the banking plan for each of the four districts is contained in Tables 3, 4, 5 and 6.

Table 3
BANKING PLAN FOR BALASORE DISTRICT
(Rupees in Lakhs, 1 lakh = 100,000)

Name of the bank	Phasing	Physical programme		Total financial outlay	Down payment @5%	Total financial. assistance	National bank's refinance @90%
		A	B				
Balasore							
Gramya Bank	1984-85	10	125	4.55	0.227	4.323	3.891
	1985-86	15	125	4.95	0.248	4.702	4.232
	Sub-total	25	250	9.50	0.475	9.025	8.123
State Bank of India	1984-85	10	30	1.70	0.085	1.615	1.453
	1985-86	10	35	1.85	0.092	1.758	1.582
	Sub-total	20	65	3.55	0.177	3.373	3.035
United Commercial Bank	1984-85	5	20	1.00	0.050	0.950	0.855
	1985-86	5	25	1.15	0.057	1.093	0.984
	Sub-total	10	45	2.15	0.107	2.043	1.839
	Grand Total	55	360	15.20	0.759	14.441	12.997

Description of Physical Programme	Unit cost (Rs.)
A — Danga	8,000
B — Hilsa gillnet	3,000

Table 4
BANKING PLAN FOR GANJAM DISTRICT
(Rupees in Lakhs, 1 lakh = 100,000)

Name of the bank	Phasing	Physical programme (Nos.)						Total financial outlay	Down payment @ 5%	Total financial assistance	National bank's refinance @ 90%
		A	B	C	D	E	F				
State Bank of India	1984-85	40	10	70	70	20	50	7.260	0.363	6.897	6.207
	1985-86	40	15	40	50	25	45	6.310	0.315	5.995	5.396
	Sub-total	80	25	110	120	45	95	13.570	0.678	12.892	11.603
Canara Bank	1984-85	10	10	10	15	10	20	2.495	0.125	2.370	2.133
	1985-86	10	10	10	15	10	20	2.495	0.125	2.370	2.133
	Sub-total	20	20	20	30	20	40	4.990	0.250	4.740	4.266
Andhra Pradesh Bank	1984-85	10	8	10	8	8	10	1.690	0.084	1.606	1.445
	1985-86	10	7	10	7	7	10	1.560	0.078	1.482	1.334
	Sub-total	20	15	20	15	15	20	3.250	0.162	3.088	2.779
Rushikulya Gramya	1984-85	25	10	30	15	10	20	3.005	0.150	2.855	2.570
	1985-86	25	10	30	15	10	20	3.005	0.150	2.855	2.569
	Sub-total	50	20	60	30	20	40	6.010	0.300	5.710	5.139
Grand Total		170	80	210	195	100	195	27.820	1.390	26.430	23.787

Description of Physical Programme

Unit Cost (Rs.)

A = Small kattumaram	1,000
B = Big kattumaram	6,000
C = Nayalala/Kilumala (7 kg.)	1,800
D = Nayalala/Kilumala (14 kg.)	3,500
E = Jagawala (14 kg.)	3,500
F = Katlala (Sardine Net) (15 kg.)	3,700

Table 5
BANKING PLAN FOR PURI DISTRICT
(Rupees in Lakhs, 1 lakh = 100,000)

Name of the bank	Phasing	Physical programme (Nos.)					Total financial outlay	Down payment @ 5%	Total financial assistance	National Bank's refinance @ 90%
		A	B	C	D	E				
State Bank of India	1984-85	20	15	25	10	50	5.025	0.251	4.774	4.296
	1985-86	15	10	25	10	40	4.105	0.205	3.900	3.510
	Sub-total	35	25	50	20	90	9.130	0.456	8.674	7.806
Canara Bank	1984-85	3	3	5	5	5	0.865	0.043	0.822	0.740
	1985-86	2	2	5	5	5	0.755	0.037	0.718	0.646
	Sub-total	5	5	10	10	10	1.620	0.080	1.540	1.386
Grand Total		40	30	60	30	100	10.750	0.536	10.536	9.192

Description of Physical Programme	Unit Cost (Rs.)
A = Big kattumaram	6,000
B = Medium kattumaram	5,000
C = Jagawala net (14 kg.)	3,500
D = Nayalala net (14 kg.)	3,500
E = Kubliwala/Katlala (15 kg.)	3,700

Table 6
BANKING PLAN FOR CUTTACK DISTRICT
(Rupees in Lakhs, 1 lakh = 100,000)

Name of the bank	Phasing	Physical programme (Nos.)							Total financial outlay	Down payment @ 5%	Total financial assistance	National Bank's re-fin-ance @ 90%
		A	B	C	D	E	F	G				
1. Cuttack Gramya Bank	1984-85	5	15	5	10	5	10	8	3.19	0.16	3.00	2.727
	1985-86	8	20	5	10	5	10	7	3.39	0.17	3.20	2.898
	Sub-total	13	35	10	20	10	20	15	6.58	0.33	6.20	5.625
2. United Bank of India	1984-85	2	5	2	5	—	2	5	1.050	0.050	1.00	0.900
	1985-86	3	5	3	5	—	3	5	1.225	0.061	1.14	1.048
	Sub-total	5	10	5	10	—	5	10	2.275	0.111	2.14	1.948
3. Bank of India	1984-85	2	—	2	3	—	—	—	0.415	0.021	0.34	0.355
	1985-86	3	—	2	3	—	—	—	0.480	0.024	0.46	0.410
	Sub-total	5	—	4	6	—	—	—	0.895	0.045	0.80	0.765
4. Canara Bank	1984-85	2	—	2	3	—	—	—	0.415	0.021	0.34	0.355
	1985-86	3	—	2	3	—	—	—	0.480	0.024	0.46	0.410
	Sub-total	5	—	4	6	—	—	—	0.895	0.045	0.80	0.765
5. State Bank of India	1984-85	2	—	2	3	—	—	—	0.415	0.021	0.34	0.355
	1985-86	3	—	2	3	—	—	—	0.480	0.024	0.46	0.410
	Sub-total	5	—	4	6	—	—	—	0.895	0.045	0.80	0.765
Grand Total		37	45	27	48	10	25	25	11.540	0.576	10.74	9.868

Description of Physical Programme	Unit Cost (Rs.)
A = Bengali dinghi	6,500
B = Big kattumaram	6,000
C = Nakuda	7,500
D = Hilsa gill net	4,500
E = Bedha net	5,000
F = Jagawala (14 kg.)	3,500
G = Kilumala/Nayalala (14 kg.)	3,500

Coverage of banking plan:

While preparing the banking plan and determining the type and quantity of investment, it was assumed that the lending programme would primarily provide funds for replacing craft and gear and diversifying fishing effort — areas presently catered to by non-institutional sources of finance. Because of its experimental character, the banking plan aimed at covering only a section of the target group, at providing only a fraction of the total credit requirement. The total number of craft and gear in each district was divided by their life-span to arrive at the annual replacement requirement. An average lifespan of three years was taken for nets, 10 years for displacement fishing craft and four years for log rafts (kattumarams).

Table 7 compares the annual replacement requirement for craft and gear for each district with the number of craft and gear covered in the banking plan. For calculating the annual financing of boats and nets, the average of the allotments for 1984-'85 and 1985-'86 has been taken.

Table 7
COVERAGE OF BANKING PLAN*

	Balasore	Cuttack	Puri	Ganjam	Total
A Total no. of gear	5563	710	1592	5271	13136
B Total no. of displacement craft	1852	999	180	231	3262
C Total no. of log rafts (kattumarams)	—	141	1108	2728	3977
D Annual gear replacement/ requirement (in nos.)	1854.33	236.67	530.67	1757	4378.67
E Annual displacement craft/ replacement requirement	185.20	99.90	18	23.10	326.20
F Annual kattumaram replacement/requirement (in nos.)	—	35.25	277	682	994.25
G Average annual no. of gear to be financed according to banking plan	180	67.50	95	350	692.50
H % of total requirement	9.70%	28.52%	17.90%	19.92%	15.82%
I Average annual no. of displacement craft to be financed according to banking plan	27.5	18.50	—	—	45.55
J % of total requirement	14.85%	18.52%	—	—	14.10%
K Average annual no. of log rafts to be financed according to banking plan	—	22.50	35	125	182.50
L % of total requirement	—	63.83%	12.64%	18.33%	18.26%

* The figures regarding total number of craft and gear are from BOBP/WP/29, "Artisanal Marine Fisheries of Orissa a Techno-Demographic Study" M H Kalavathy and U. Tietze, Madras, India, December 1984.

As the table indicates, the banking plan is designed to meet 16 per cent of the requirements for new fishing gear, 14 per cent of the total requirements for new fishing craft and 18 per cent of that of log rafts. Assuming that the artisanal fisheries sector will neither expand nor shrink and also that technological innovations will not be introduced, the figure of Rs. 6.5 million that the banking plan earmarked to be disbursed over two years is just sufficient to cover about

one-sixth of the credit annually needed for replacing the traditional fishing craft and gear of Orissa's artisanal marine fisheries.

Fishing gear and craft were supposed to be covered to a similar extent in the banking plan. All in all, 924 households were to be financed annually, amounting to 5.5 per cent of the 16,886 fisherfolk households in Orissa. Meeting about one-sixth of the annual credit requirement for replacement of craft and gear, covering more than 5 per cent of all households, involving more than 20 bank branches and all four coastal districts, the banking plan seems to include a sufficiently large number of fisherfolk to permit generalization of the results and experiences of the credit scheme.

6. IMPLEMENTATION OF CREDIT SCHEME – ACHIEVEMENTS AND PROBLEMS

The implementation of the credit scheme can be divided into six phases:

First Phase	: October 1983 to April 1984
Second Phase	: April to September 1984
Third Phase	: September 1984 to February 1985
Fourth Phase	: February to September 1985
Fifth Phase	: September 1985 to January 1986
Sixth Phase	: January to April' 1986

At the end of each phase a workshop or seminar was held to review loan disbursements and loan recovery and discuss and solve problems which occurred while implementing the scheme. The workshops also set disbursement targets for the next phase, and agreed to measures to be taken in order to improve scheme implementation. Timings of phases and workshops were decided in the context of the banking plan according to the progress of the credit scheme from phase to phase.

Phase 1: October 1983 to April 1984

Loan disbursements commenced in October 1983. The first phase ended with a 4-day seminar in April, because it was felt that a sufficient number of loans had been disbursed during the previous six-month period and that loan recovery had been pursued long enough for a worthwhile review of the first results of the credit scheme. Moreover, a number of problems that had come up since the beginning of the credit operations needed to be discussed.

Another important reason for holding a seminar in April 1984 was that the participating banks had to decide whether, in the light of the first experiences, they wished to continue the refinance arrangement with NABARD which necessitated a firm branch commitment over a certain period and an increase in lending to fisherfolk.

Yet another reason for terminating the first phase in April was that this month marked the beginning of the 2-3 month lean period for fishing, during which lending for productive purposes is naturally at its lowest.

Apart from the fisheries extension officers and supervisory staff, representatives of 21 branches belonging to seven different banks participated in the seminar.

During the first phase approximately Rs. 800,000 had been disbursed to about 300 households. The repayment position ranged from 92% to 311 % per branch — an excellent performance when compared to the repayment schedule. Advance recovery had apparently been considerable.

The seminar reviewed appraisal and disbursement of loan applications as well as loan recovery. It also discussed and finalized refinance proposals, which then were forwarded through the Directorate of Fisheries to NABARD at the seminar itself.

Another important aspect discussed was the monitoring of the scheme and the scope for a deposit mobilization campaign among fisherfolk.

Regarding appraisal of loan applications and disbursement of loans BOBP conducted a branch-level enquiry, using specially designed question schedules for branch managers/branch field officers, loanees and fisheries extension officers¹⁰.

¹⁰ The schedules are shown in Annexure 6.

The questionnaire for the branch managers/branch head officers yields information about appraisal, sanctioning and disbursement of loans (especially about reasons for delays if any); about the use of the village profile and activity form while appraising loan application; and about recovery of loans and reasons for default. It also enquires into deposit mobilization and solicits suggestions from the branch officers.

The questionnaire for the fisheries extension officer enquires about the identification of borrowers, sponsoring of loan application, utilization of loans, and the response of the non-institutional sources of credit, besides asking for suggestions and recommendations. The schedule meant for loanees covers the same aspects as mentioned above but from the standpoint of the borrower; it also enquires about the quality of the assets supplied as well as the timeliness of the loans disbursement.

The results of the enquiry, together with the reports of branch officers and fisheries extension officers, highlighted the following aspects:

a) Need orientation of the scheme, and its versatile character. When compared to earlier schemes offering only a particular type of craft and gear, this scheme offered a wide variety of different types of craft and gear which could be obtained either singly or in various combinations, according to the actual need of the borrower. It was found that this particular character of the scheme was put to good use: bank finance for four different craft and gear types, single and in various combinations. The major application of the scheme, both in the north of the state and in the south, was for fishing gear to exploit the major commercial species in the area. Boats were also applied for and sanctioned, but there were fewer boats than nets. As for the purposes of the loans, most of them were classified as "Complementary and First Acquisition of Assets". There were hardly any loans taken for diversification of fishing effort. In other words, the loans were used mainly to maximize and complement the equipment of existing fishing units, to replace worn out equipment and acquire new craft and gear.

As far as the unit cost was concerned, it was found that the actual loan amount was modified (from that stipulated in the banking plan), taking into account local prices and the capacity/willingness of borrowers to contribute to the financial outlay from their own resources,

While identifying villages and borrowers, village profile and activity forms were used to examine the credit needs of individual borrowers and to assess the technical feasibility of the proposals. Most borrowers were identified jointly by fisheries and bank officers; this facilitated familiarization between borrower, fisheries officer and bank officer and thereby had a positive impact on the processing of loan applications and loan recovery. It also improved the technical competence of bank staff and their general attitude towards lending to fisherfolk.

Three major obstacles to speedy documentation and sanctioning of loans were identified: viz. delays in obtaining the "no-dues certificate" from other financial institutions, delays in certifying the residence of fishermen because of lack of landed property, and delays because of security requirements for loans exceeding Rs. 5,000.

Regarding the "no-dues certificate", it was agreed that joint effort on the part of the loanee, the bank and fisheries officers may yield faster results. Regarding the question whether a fisherman was a resident of a certain area or not, it was agreed that the banks would accept a statement from the concerned fisheries officer.

As for delays posed by the requirement of security for loans above Rs. 5,000 there was no easy solution, because guidelines had to be adhered to. It was pointed out that the solution of a third party guarantee might result in the guarantor making financial claims on the loanee — this again might ruin the economic viability of the schemes and thus lead to default.

Another solution, already adopted by some of the loanees, was to contribute the amount exceeding Rs. 5,000 from their own resources. The loanees preferred to do this even if landed property or gold were available as security.

When rejection/withdrawals of loan applications were investigated, it was found that there were more withdrawals (by fisherfolk) than rejections (by banks). Fisherfolk withdrew applications usually because of delays in processing and disbursing loans. Banks rejected loan applications usually because applicants had loans outstanding with other financial institutions, mainly cooperatives.

The recovery of loans was good, because of joint field visits by extension officers and bank staff, undertaken weekly or fortnightly. Instalments were collected from some loanees during these field visits; for other loanees, the field visits served as a reminder of repayment due.

When investigating the reasons for good and poor loan recovery, the following major reasons were identified:

- Good recovery: — close contact of bank branch with borrowers through frequent visits
- timely disbursement of loan
- good catches
- Poor recovery: — poor catches
- unexpected expenditure in case of social functions and accidents, illness
- damage or loss of fishing craft/gear

Regarding repayment schedules, no uniform practice was adopted. Some banks allowed fisherfolk the usual two-month repayment holiday during the monsoon period, when the sea is too rough to go fishing. Other banks, however, insisted on equal monthly instalments.

Again, some banks did not allow for a grace period (as agreed earlier) while other banks permitted a grace period of 2-3 months. It was generally recommended at the seminar, that the loans be disbursed in time, so that the assets could be immediately utilized; no grace period is then required. A recommendation to allow for seasonal variations in income from fishing when fixing repayment schedules, was also made.

The last important problem discussed in the seminar concerned loan disbursement, in particular selecting the supplier of fishing craft and gear. Earlier it had been agreed that a joint decision should be made by loanee, bank officer and fisheries extension officer. In some cases, however, no decision could be reached, resulting in further delays. To overcome this difficulty, it was recommended that the loanee should be given the choice of supplier with the fisheries extension officer having to certify the technical quality of the product.

Another aspect discussed in the seminar was the need to use savings to help develop the potential of small-scale fisheries as a client of institutional finance. Though borrowers were usually asked to open savings accounts at the time of loan disbursement, the deposits generated were at a rather low level. An important reason for the low deposits — apart from the lack of the saving habit and the poor educational effort of banks — is that the interest rates paid out to fishermen for their savings (and medium-term deposits) are lower than the interest they have to pay on what they have borrowed. Naturally, borrowers prefer to repay the loans in advance rather than deposit their savings.

It was felt that unless a special promotional drive was undertaken (which aimed at supplementing and complementing non-institutional forms of savings presently undertaken), any savings effort had to focus on persons other than those who had already received loans.

As a first step, it was suggested that an audio-visual be prepared to promote the habit of bank savings amongst fisherfolk.

As far as monitoring of the scheme was concerned, the participants suggested that the scheme be reviewed at monthly meetings of the fisheries extension officers of a district. Furthermore the scheme was to be included for discussion in the general monthly monitoring meetings of the district coordination committees.

It was also highlighted that lack of bank officers familiar with marine fisheries presented an obstacle to more efficient scheme monitoring, despite the technical support of the fisheries extension officers.

Hence, the participating banks requested BOBP to arrange for the technical training of bank officers in marine fisheries at a later stage of the activity. This training would also benefit the future involvement of banks in financing small-scale marine fisheries.

Regarding the next steps, it was decided to concentrate on loan recovery, because the lean season in fishing had just commenced. This is why lending operations would naturally remain at a lower level until the beginning of the fishing season in July/August.

Phase 2: April to September 1984

One-day review meetings were held in Balasore, Cuttack, Puri and Ganjam districts in September 1984.

As targeted, only a small amount had been disbursed since the last review meeting (viz. about Rs. 200,000) because of the onset of the lean fishing season.

The loan recovery during the lean season showed a decline when compared to the earlier position.

The table below shows the accumulated disbursement and recovery figures of the four districts:

Table 8
LOAN DISBURSEMENT AND LOAN RECOVERY IN SEPTEMBER 1984 (Rs.)

District	Disbursement	Rate of repayment
Balasore	184,425	3 19 %
Cuttack	86,800	47%
Puri	435,775	105 %
Ganjam	305,230	58 %
Total	1,012,230	93%

Even though the lean season might have had a general negative impact on the loan recovery, variations in performance among the four districts were considerable. This suggests that other factors too could have influenced loan recovery. When going into the branch level figures, the following reasons were identified:

1. The grace periods granted for a number of loans disbursed during Phase I, which had kept the recovery rate artificially high, were over now, so that the recovery figures gradually came back to 'normal'. Similarly, it was found that a number of loans had been disbursed during Phase II also with a grace period; so a similar effect could be expected for the next phase.
2. There were a few cases of intentional default, for the first time in the credit scheme.
3. Very few joint field visits by bank and fisheries officers
4. Even though criticized at the previous review meetings, inappropriate repayment schedules (the demand for 12 equal monthly instalments per year) were not changed in many instances.
5. While reviewing repayment figures at the branch level, it was found that the good repayment record of some branches was based on a few individuals who repaid their loans very fast, while some others repaid very little or nothing at all. This tendency has to be checked, otherwise the recovery position could decline fast once the first loans are repaid.

In order to improve loan recovery, particularly in Cuttack and Ganjam districts, it was recommended that:

- repayment schedules consisting of 10 equal monthly instalments (allowing for a repayment holiday during the off-season), as already suggested during the previous review meeting, be introduced.

fisheries officers. should meet intentional defaulters and explain that the Government is not prepared to accept non-repayment of loans.

Two more problems which came up during the loan disbursements concerned the supply of assets and the method of ascertaining the loanee's place of residence (information needed by banks when documenting loan cases).

The supply of assets: Loan applicants usually suggested that they would procure large kattumarams (log rafts) from a neighbouring state, where more and better-quality kattumarams are available than in Orissa. At the review meetings it was suggested that banks should agree to this proposal; but the fisheries extension officer should certify that the log rafts are new and

not second hand. In the long run, however, banks and fisheries departments should support the setting up of small construction sites for log rafts in Orissa by local carpenters. This recommendation by the review meeting elaborates on an earlier one to leave the ultimate choice of the supplier to the borrower.

The second case referred to a problem dealt with already during the last review meeting, viz. the place of residence of the borrower, a piece of information needed by banks when documenting loan cases. In Puri town (Puri district), fisherfolk have been residing for decades on government land on the beach without being officially entitled to stay there. Citing an earlier recommendation, the review meeting suggested that the District Coordination Committee be asked to take action and for the time being to accept the fisheries extension officers' statement regarding the residence of a loan applicant.

Regarding future loan disbursements, an action plan was prepared until February 1985. The physical and financial targets as stated in the NABARD banking plan were discussed and further specified at the branch level and the extension officer level, and dates were fixed for disbursement of loans. The balance of the 1984-85 targets of the banking plan not achieved so far were split up between the third and the fourth phase (September 1984 to February 1985 and February to September 1985 respectively).

Accordingly, a disbursement target of about Rs. 1 million was fixed for the next six months which, if achieved, would double the total loan amount disbursed during the past 12 months. The speeding up of the disbursement was considered possible in the context of the experiences gained so far by the branches and in view of the fact that phase 3 would cover the peak fishing season and thus meet the maximum demand for craft and gear.

Regarding review meetings, it was felt that they should be again conducted at a district level to refer more closely to field problems. During the September workshops, it could be seen from the lack of proper implementation, that some of the topics discussed and agreed upon, particularly regarding loan recovery, had not been fully understood in the context of the field conditions. It was therefore decided to extend their duration from one to three days, including a joint field visit of all participants.

Phase 3: September 1984 to February 1985

All 3-day review meetings at the district level were well attended by the concerned Directors of Fisheries, Assistant Directors of Fisheries and Fisheries Extension Officers, as well as by bank branch managers, field officers and representatives of regional bank offices/head offices.

The sanctioning/disbursement target of Rs. 1,100,000 had been reached bringing the total sanctioning/disbursement figure to Rs. 2,117,000. The repayment rate (amount repaid/amount due) declined further from 93 per cent in September 1984 to 81 per cent.

The accumulated district-wise figures are given below:

Table 9
LOAN DISBURSEMENT AND LOAN RECOVERY IN FEBRUARY 1985 (Rs.)

District	Balasore	Cuttack	Puri	Ganjam
Total amount sanctioned/disbursed	437,000	300,000	720,000	660,000
Repayment rate	94%	68 %	94%	65 %

The decline of the repayment rate was entirely due to an anomaly in Balasore district. There the repayment rate was higher than 300% at the time of the previous review meeting, because of a 3-month grace period for loan repayment (not granted in the other coastal districts).

Result: an artificially high repayment rate, which later came down to its true level.

The repayment in Puri district remained at the same level as in September 1984, while the repayment in Ganjam and Cuttack districts improved from 47% and 58% to 68% and 65% respectively. It was agreed during the meetings that repayments, particularly in Cuttack and

Ganjam districts, can be further improved if joint field visits are carried out more frequently by field officers from bank branches and fisheries extension officers.

The second day of each district meeting was spent on a field visit to a problematic village in the district. The difference between the BOBP-NABARD scheme and subsidy schemes was discussed with the fisherfolk. During each meeting, a surprisingly large amount was collected towards loan repayment instalments and deposits, a fact that stresses the importance of regular field visits by bank and fisheries staff as well as the deposit potential in fishing villages.

On the third day of each meeting, an action plan for the next and final round of loan disbursements under the NABARD allotment for 1984/85 was prepared, as well as steps to improve loan repayment. Modifications were suggested to the NABARD banking plan.

The following problem areas were discussed in detail during the review meetings.

1. Sponsoring and processing of loan applications.

In most cases, the time span between loan application and loan disbursement did not exceed three weeks. In a few cases delays occurred. The following reasons were identified for delays in sponsoring and processing loan applications.

- Repayment schedules had to be discussed with borrowers
- Borrowers had to be convinced that the loans had to be disbursed in kind
- Transfer of bank officers
- Identification of guarantor if loan amount exceeds Rs 5000
- Politically motivated problems in a village: intentional default was propagated while at the same time subsidies were demanded
- Clashes between artisanal fishermen and trawler fishermen

2. Utilization of village profiles and activity forms, utilization of a variety of schemes:

While sponsoring loan applications to the bank branches the fisheries extension service forwarded village profiles and activity forms to the branch managers, who used them to appraise the applications. A properly filled in activity form together with the village profile had become a pre-requisite for completing the banks' standard loan application form, which was then quickly processed.

The versatility of the credit scheme was well-tapped, since all the 20 types of craft and gear included in the scheme were applied for and financed.

3. Repayment of loans:

Reasons for poor repayment were mainly the lack of regular joint field visits by bank and fisheries officers; deviation from the repayment schedule of 10 equal monthly instalments a year and a two-month repayment holiday in the second quarter of the year; and intentional default in one village (mentioned earlier). Efforts to improve the repayment position were planned with regard to specific branches.

The next district-wise review meetings were planned for September 1985. Another Rs. 1 million was targeted for disbursement at the beginning of the peak fishing season July/August. District-wise, branch-wise and bank-wise targets and deadlines were decided upon for sponsoring and disbursing loans to meet the 1984/85 targets of the banking plan.

In the course of the lending operations, the need for district-wise and bank-wise reallocation of funds had arisen because of the fact that lending prospects were higher in one area than in another, something not anticipated in the banking plan. Likewise, the organizational preparedness of some branches turned out to be better than the preparedness of others; therefore it seemed appropriate to consider reallocations. Reallocations of refinance were discussed in the meetings and then forwarded to NABARD for consideration.

Phase 4: February to September 1985

At the end of phase 4 in September 1985, one-day review meetings were held similar to the one held at the end of phase 2 — one meeting each for Balasore district, Cuttack/Puri district and Ganjam district respectively.

The meetings were attended by the Additional Director of Fisheries, the Deputy Directors of Fisheries, Assistant Directors of Fisheries and Fisheries Extension Officers, as well as by bank branch managers, field officers and representatives of regional bank offices/head offices. A

representative of NABARD attended the review meeting in Balasore. Since the February review meeting, another Rs. 942,000 had been disbursed, while the targeted volume of credit was approximately Rs. 1,012,000. Thus the total fisheries credit disbursed by the end of phase 1 of the BOBP/NABARD banking plan increased to Rs. 3,059,000 against a target of Rs. 3,147,000. The rate of loan recovery remained at the same level (81%) as at the last review meetings in February. Considering the fact that the lean season for fishing covered most of the period in between the two review meetings, the recovery rate was satisfactory even though there was scope to improve it further.

Even though the overall rate of loan repayment remained at February level of 81 per cent, the position of the four coastal districts had changed. When compared to February, the loan recovery improved in Balasore district from 94 per cent to 104 per cent and in Puri district from 94 per cent to 103 per cent while the rate of loan recovery declined in Cuttack district from 68 per cent to 53 per cent and in Ganjam district from 65 per cent to 61 per cent.

Table 10
LOAN RECOVERY, DISTRICT-WISE IN SEPTEMBER 1985 (Rs.)

	Balasore	Cuttack	Puri	Ganjam	Total
Amount due for repayment	90,615	67,830	217,000	254,000	629,445
Amount repaid	94,202	36,000	223,071	156,000	509,273
Rate of recovery	104%	53%	103%	61%	81%

When looking into reasons for the comparatively poor repayment in Cuttack and Ganjam districts, it was found that a few bank branches were responsible. With one exception these branches were the same as those that showed a poor loan recovery at the previous review in February.

In all cases, the lack of regular joint field visits by bank field officers and fisheries extension officers was considered the main reason for the poor repayment of loans. It was recommended that legal proceedings be initiated to deal with individual cases of intentional default in order to improve the repayment discipline of borrowers.

When seen with the February review meetings, inappropriate repayment schedules were found to have been corrected and made to suit the earnings patterns of the fisherfolk.

As for the sponsoring and processing of loan applications, the overall performance improved; so did the confidence of the bank branches to handle a large number of loan cases. This was the reason that the next phase was planned for a period of only three months. Because it was felt that field problems had been sufficiently discussed and that a state-level gathering at this advanced stage of the scheme may be useful in terms of reallocation of funds and refinancing among various banks and districts, a 2-day workshop was proposed in Puri in December 1985.

Phase 5: September 1985 to January 1988

The December 1985 review meeting was well attended: there were 55 banks and fisheries officers, the Additional Director of Fisheries, NABARD representatives from Bombay and Bhubaneswar, the chairmen of all three regional rural banks and headquarters representatives of all banks.

Since the review meetings of September 1985, another Rs. 1.7 million (Rs. 17 lakhs) had been disbursed, increasing the total disbursement figure to Rs. 4.88 million.

Thus 78 per cent of the total financial assistance envisaged in the banking plan had been extended. With five more months to go until the end of the stipulated loan disbursement period of the NABARD scheme, this figure compared very well with the disbursement schedule agreed on earlier by the participating banks and marine fisheries extension centres.

Compared to the previous review meetings, loan recovery had improved substantially in Cuttack and Ganjam districts, thereby improving the overall rate of loan recovery from 81 per cent to 88 per cent.

When comparing the loan disbursement achievements of different districts, Puri and Cuttack district had already overshot their targets, while Balasore and Ganjam had to go a long way to reach them.

Table 11
ACHIEVEMENT OF LOAN DISBURSEMENT TARGETS IN DECEMBER 1985
(in Rs. lakhs, 1 lakh = 100,000)

District	Scheduled financial assistance as per banking plan	Present financial assistance	Anticipated financial assistance by end of disbursement period	Achievement
Balasore	14.4	6.4	10.9	– 3.5
Cuttack	10.9	11.1	15.5	+ 4.6
Puri	10.2	13.1	17.7	+ 7.5
Ganjam	26.4	18.2	23.2	– 3.2
Total	61.9	48.8	67.3	+ 5.4

Regarding the loan recovery, the districts compare as follows:

Table 12
LOAN RECOVERY IN DECEMBER 1985
(in Rs.)

District	Amount due for repayment	Amount repaid	Rate of recovery
Balasore	122,654	125,079	102%
Cuttack	69,583	48,660	70%
Puri	332,011	290,055	87%
Ganjam	301,913	265,523	88%
Total	826,161	729,317	88%

The rate of recovery in Balasore remained almost at the same high level as earlier; the improvement noted in Cuttack and Puri districts derives from the performance of all bank branches except two which found the fishing villages financed by the bank difficult of access. The decline in the rate of loan recovery in Puri district is attributed to operational difficulties at one bank branch, because of similar reasons.

When discussing the anticipated overshooting in Cuttack and Puri of the disbursement targets specified in the banking plan and the anticipated shortfall with respect to Balasore and Ganjam districts, the following observations were made in the review meeting.

The target shortfall in Balasore district was not because organizational preparedness was lacking — many bank branches and fisheries extension centres took part in the Balasore operation. Nor was loan recovery the problem — it has been excellent from the beginning of the scheme. The demand for bank credit was less in Balasore than in other districts because of a stronger non-institutionalized credit system (middlemen and fish merchants), besides the availability of larger amounts of subsidies under schemes such as ERRP and IRDP.

In Cuttack and Puri districts, the performance of the participating branches improved considerably since the start of the credit scheme. The number of branches also increased (from the time the banking plan was drawn) — another reason for the plan's target being overshoot. In both districts, a rapidly increasing demand for bank credit met with quick corresponding improvements in organizational preparedness on the part of the coastal bank branches.

Even though the organizational preparedness improved very well in Ganjam district too, the credit absorption capacity of the fisherfolk seemed to have been overestimated in the banking plan. The activities of non-institutional sources of finance and defaults by cooperative societies limited the group of eligible applicants for bank loans in this district.

All in all, the performance of the banks regarding loan recovery and loan disbursement (despite reducing phase five to three months) reflected the improved efficiency of the participating bank branches.

Recommendations regarding repayment schedules, disbursement procedures etc. made in earlier review meetings were adopted by almost all branches participating in the fisheries pilot project. The final review meeting, to be held as a concluding seminar, was scheduled for the beginning of April. It was planned to complete the loan disbursements of the NABARD banking plan before the seminar – three months ahead of schedule.

Phase 6: January to April 1986

During phase 6, one more branch joined the fisheries credit scheme, increasing the total number of bank branches (of 9 different banks) to 28. The concluding seminar of the fisheries credit programme, held in April 1986, was attended by 64 fisheries and bank personnel, representing all bank and fisheries extension branches, as well as by representatives from their controlling and head offices. Another Rs. 1.6 million was disbursed during this last phase, increasing the total disbursement to Rs. 6.09 million. Together with the margin provided by the borrowers, this amounted to a total investment of Rs. 6.41 million which means that 99 per cent of the disbursement target was achieved.

At the request of the participating banks, an additional Rs. 14 lakhs was sanctioned by NABARD. The rate of loan recovery has further improved to 95 per cent.

Audio-visual equipment, along with a slide show that promotes the idea of bank savings among fisher-folk, was distributed to all nine participating banks and the Department of Fisheries. It was agreed that log books recording when and with what results the audio-visual was used by the banks would be maintained.

The district-wise results with regard to loan disbursement and loan recovery, the overall figures and NABARD withdrawals as of April 3, 1986, are shown below:

Table 13

LOAN DISBURSEMENT AND RECOVERY BY BANK AND DISTRICT, AS OF APRIL 1986

Balasore district

(In Rs.)

Name of bank branch	Amount sanctioned	Due	Recovery	%
BGB Chandaneswar	101,300	29,715	23,830	80
BGB Chhannua	114,000	42,550	33,213	78
BGB Kasafal	4,500			
BGB Avana	131,900	24,187	28,290	117
BGB Mandari	30,725	8,810	8,460	96
BGB Kaithakola	132,000	27,680	32,120	116
BGB Rotei	26,945	14,580	9,340	64
BGB Total	54 1,370	147,522	135,253	92
UCO Baliapal	77,805	19,880	16,958	—
UCO Gopalpur	65,865	3,000	1,465	
UCO Total	143,670	22,880	18,423	80.5
TOTAL	685,040	170,402	153,676	90

Cuttack district

Name of bank branch	Amount sanctioned	Due	Recovery	%
CGB Talacua	271,800	35,000	30,000	86
CGB Arunnagar	107,500	3,600	9,000	250
CGB Atharbanki	144,000	15,322	16,620	108
CGB Total	523,300	53,922	55,620	103
UBI Mahakalpara	115,000	19,000	7,300	38
UBI Paradeep	110,300	15,400	11,800	77
UBI Total	225,300	34,400	19,100	56
BI Paradeep	173,500	15,470	19,080	123
Canara Pradeep	589,000	60,000	85,881	143
TOTAL	1,551,100	163,892	179,681	110

Puri district		(In Rs.)		
Name of the bank branch	Amount sanctioned	Due	Recovery	%
SBI Puri	961,307	248,430	290,028	117
SBI Nimapara	138,800	94,379	28,227	30
SBI Total	1,100,107	342,809	318,255	93
Canara Konarak	108,500	47,100	60,406	128
Canara Puri	23 1,350	12,732	20,370	160
Canara Total	339,850	59,832	80,776	135
Bank of India	267,400	13,620	16,220	119
TOTAL	1,707,357	416,261	415,251	100

Ganjam district				
Name of bank branch	Amount sanctioned	Due	Recovery	%
RGB Palur	33,844	2,100	2,270	108
RGB Humma	104,500	15,500	16,700	108
RGB Chatrapur	299,064	32,000	35,000	109
RGB Sonapur	163,300	37,000	51,300	139
RGB Total	600,708	86,600	105,270	122
Andhra Gopalpur	414,100	102,158	82,458	81
Canara				
Berhampur	406,500	77,849	77,640	100
SBI Khodasing	715,000	206,000	155,000	75
TOTAL	2,136,308	472,607	420,368	89
GRAND TOTAL	6,079,805	1,223,162	1,168,976	97

7. DESIGN AND CONDUCT OF 2-WEEK TRAINING COURSE FOR BANKERS ON FISHERIES FINANCE

Experience in training bankers in fisheries finance, acquired during the fisheries credit pilot project, were used by BOBP to develop syllabi¹¹ and course material for a 2-week training course for bankers on marine fisheries finance. This was held in Pune in April 1986. It was attended by 39 bankers and fisheries officers from Orissa.

As distinct from earlier training courses on fisheries for bankers, the course design and materials concentrated exclusively on marine fisheries finance. The latest developments in brackishwater fish and prawn culture, deep sea fishing, and innovative technologies for the traditional sector; the latest techniques for preservation, processing and marketing of fish and their economics and financial requirements were incorporated. Other areas included were traditional and small-scale mechanized fishing craft and gear, marine resources potential and the socio-economic characteristics of traditional fishing communities.

Special attention was paid to applying banking procedures to the special problems of fisheries finance, viz. the pre-investment and pre-sanction scrutiny, loan disbursement and post-disbursement follow-up/loan recovery. Techniques of financial appraisal – such as discounted cash flow, economic and financial rate of return, and sensitivity tests, and their relevance to marine fisheries finance, were taught in the course and applied during field trips, when project proposals were prepared by course participants.

Central and State Government agencies like CIFE, MPEDA, NABARD and the Department of Fisheries, Orissa, cooperated actively in the preparation and conduct of the course. The learning and teaching materials, including audio-visual aids such as video productions, film strips and slide shows, have since been disseminated to several training institutes of nationalized banks in India.

¹¹ The course syllabus is shown in Annexure 7

8. CONCLUSIONS

The Orissa credit project demonstrates that non-subsidized lending to marine fisher-folk in India can help banks and fisherfolk alike, if banking services are able to incorporate the principles of flexibility, timeliness, simplicity and borrower education/extension.

Direct priority sector lending by commercial and regional rural bank branches, supported by extension services by the fisheries department, seems to offer the best scope to incorporate the principles mentioned above. The steady improvement in loan recovery accompanied by a steady increase in loan disbursement particularly after the scheme gained momentum from September 1985 onwards – reflects a genuine improvement in bank services, and the adoption of the recommendations made during earlier review meetings.

The scheme is replicable elsewhere in India, if necessary adjustments are made to the lending programme, the technical dimensions of craft and gear, average cost estimates etc. The similarity of the banking system and of the technical and socio-economic features of artisanal marine fisheries makes such replicability possible. The availability of an energetic fisheries extension service, like the one in Orissa, is, however, crucial during the initial stages of this kind of credit scheme, at least until banks have acquired their own expertise in dealing with the small-scale fishing community.

It has to be mentioned that the fisheries credit scheme in Orissa is only a first step towards developing a comprehensive institutional financial market for small-scale marine fisher-folk. Now that banks have confidence and expertise in working in coastal areas, further steps can be taken such as:

Conduct of deposit mobilization campaigns in fishing villages aiming initially to replace non-institutional savings by institutional savings. These campaigns should aim both at short-term and long-term deposits, which should be then made available as advances to fisherfolk.

- Motorized boats (even though investment is considerably higher) should also be included in the lending programme to enable traditional fisher-folk to own more of advanced fishing technology. Special arrangements will have to be thought out regarding loan security etc.
- Short term lending should be promoted for non-productive purposes also, so that coastal bank branches can increase the variety of services offered.

Annexure 1:

SCHEME ECONOMICS: BANK LENDING PROGRAMME FOR FISHING ASSETS

Detailed here are the costs, expected earnings and likely profitability of various assets financed under the Orissa credit project. The assets include various types of boats (both displacement and log raft); various types of fishing gears (gillnets, encircling nets, inshore seines and wallnets); and bicycles for fish marketing

Note The data given here are based on field notes Dimensions of fishing craft and gear vary from village to village as they are not based on standard designs

List of Assets Financed

Scheme		Cost of asset (Rs)
1	FISHING BOATS	
1.1	Displacement Craft	
	1.1.1 Danga/Patia/Botali	8,000
	1.1.2 32' Salti	7,100
	1.1.3 27' Salti	5,000
1.2	Log Raft	
	1.2.1 2-Section Kattumaram	5,000
	1.2.2 3-Log Kattumaram	3,000
	1.2.3 4-Log Kattumaram	2,000
2	FISHING GEAR	
2.1	Gillnets	
2.1.1	Large-mesh gillnets	
	2.1.1.1 Nakuda	7,500
	2.1.1.2 Sanla	5,500
	2.1.1.3 Phasi	5,000
2.1.2	Medium and Small Mesh Gillnets	
	2.1.2.1 Jagawala	3,500
	2.1.2.2 Nyalalla	1,700
	2.1.2.3 Kilmi or Kilumala	1,700
	2.1.2.4 Bhasani	1,700
	2.1.2.5 Katlala (Sardines)	2,500
	2.1.2.6 Katlala (Anchovies)	3,500
2.2	Encircling nets, Inshore Seines	
	2.2.1 Jangal/Gheri/Khia Badia/Sabado/Sarini	5,000
2.3	Wall Net	
	2.3.1 Mala or Bedha	5,700
2.4	Set Bag Net	
	2.4.1 Behundi	3,000
3	FISH MARKETING	
3.1	Bicycle Retail Fish Marketing	930
3.2	Headload Retail Fish Marketing	215

Scheme Economics Details

- 1 Fishing Boats
- 1.1 Displacement Craft
- 1.1.1 *Danga/Patia/Botali*

Specifications : 30' x 7' x 6', clinker built, sal wood
 Life span : 10 years
 Period and area of operation : All year round, except when the sea is too rough in May/June or July, operated upto 20 km.
 Mode of operation/ sharing system : Used in combination with various gillnets and together with other boats, in combination with encircling nets, wage labour or sharing system where crew members contribute net pieces.

A. Capital Cost (Rs)

Requirement of material:	4,500
– Total wood: 75 c.ft. at Rs. 60 per c.ft. Size of planks ranges from 4" to 1 ft. Likewise 13 planks in each size for chine construction. Further 5 planks for each side for top construction. Total (13 x 2) + (5 x 2) = 36 planks.	4,500
– Nails (four face) = 60 kg at Rs. 8/kg	480
– Cotton for caulking at Rs. 15/kg for 6 kgs	90
– Coal for preservation (1 tin contains 15 kgs) at Rs. 80/tin – 3	240
– Oil for cleaning at Rs. 6/kg – total 5 kgs	30
– Sail cloth (18 ft x 20 ft)	400
– Tarpaulin	400
– Iron for anchor 15 kg at Rs. 10/kg	150
– Synthetic rope for anchor, 15 mm; 10 metres	110
Total expenditure for material	6,400
– Charges for boat building	1,000
– Miscellaneous expenditure	600
Total cost	8,000

B. Annual Recurring Expenses

– Wages for 3 labourers at Rs. 10 per day for 210 fishing days (in addition to labour of applicant)	6,300
– Repair of boat and sail	800
– Hire charges for nets for 10 months at Rs. 250 per month	2,500
	9,600

C. Annual Income and Surplus

– Gross earnings from sales of fish at Rs. 5 per kg, 30 kg per fishing day and 210 fishing days	31,500
– Annual recurring expenses	9,600
Gross surplus	21,900
– Annual depreciation	800
– Net surplus, divided into	21,100
* Return on labour of applicant (boat owner)	2,100
* Return on capital	19,000

D. Economic Feasibility (estimated)

– Annual rate of return on investment	238%
– Net value added per unit of investment in Rs.	3.43

1 .1.2 32' Salti

Specifications : 32' x 6' x 3', carvel built, sal wood
 Life span : 10 years
 Period and area : All year round, except for rough days in May, June, July, operated upto of operation 5 km offshore.
 Mode of operation/: Used in combination with various gillnets and together with other boats, sharing system in combination with encircling nets, wage labour or sharing system, where crew members contribute net pieces.

A. Capital Cost

Requirements:

— 1" planks made of sal wood, 68 c.ft. at Rs. 60/c.ft.	4,080
— Arrow head 3" nails at Rs. 10/kg — 60 kg	600
— Puttying, caulking, coaltaring materials required 5 kg, 15 kg, 50 kg	400
— Anchor 19 kg, anchor rope II dia 14 mm 4 kg and sail cloth 18' x 15' and sail rope	550
— Labour charges for puttying, caulking, coaltaring	200
— Boat building charges	1,000
— Transportation and other charges	270
Total cost	<u>7,100</u>

B. Annual Recurring Expenses

— Wages for 3 labourers at Rs. 10 per day for 180 fishing days (in addition to labour of loanee)	5,400
— Repair	800
— Hire charges for nets for 9 months at Rs. 250 per month	2,250
	<u>8,450</u>

C. Annual Income and Surplus

— Gross earnings from sales of fish at Rs. 4 per kg, 25 kgper fishing day and 180 fishing days	18,000
— Annual recurring expenses	<u>8,450</u>
Gross surplus	9,550
— Annual depreciation	710
— Net surplus divided into	8,840
* Return on labour of loanee (boat owner)	1,800
* Return on capital	<u>7,040</u>

D. Economic Feasibility

— Annual rate of return on investment	99%
— Net value added per unit of investment (in Rs.)	2.01

1 .1.3 27' Salti

Specifications : 27' x 5'8" x 2'10", carvel built, sal wood
 Life span : 10 years
 Period and area : All year round, except for rough days in May, June, July, operated upto of operation 5 kms offshore.
 Mode of operation/: Used in combination with various gillnets, wage labour or sharing system, sharing system crew members contributing net pieces.

A. Capital Cost (Rs.)	
— ¾" planks made of sal wood, 38 c.ft. at Rs. 60/c.ft.	2,280
— Arrow head 3" nails, 49 kg at Rs. 10/kg.	400
— Puttying, caulking and coaltaring, materials required	400
— Anchor 10 kg, anchor rope 14 mm dia, 4 kg and sail 10' x 15' and sail rope	500
— Labour charges for caulking, puttying and coaltaring	200
— Charges for boat building	800
— Transportation charges etc.	200
— Miscellaneous	220
Total cost	<u>5,000</u>
B. Annual Recurring Expenditure	
— Wages for 3 labourers at Rs. 10 per day for 180 fishing days (in addition to labour of loanee)	5,400
— Repair	500
— Hire charges for nets for 9 months at Rs. 200 per month	1,800
Total expenses	<u>7,700</u>
C. Annual Income and Surplus	
— Gross earnings from sales of fish at Rs. 4 per kg, 20 kg per fishing day and 180 fishing days	14,400
— Annual recurring expenses	7,700
Gross surplus	<u>6,700</u>
— Depreciation	500
— Net surplus divided into	6,200
• Return on labour of loanee	1,800
• Return on capital	4,400
D. Economic Feasibility	
— Annual rate of return on investment	88%
— Net value added per unit of investment (in Rs.)	2.32

1.2 Log Raft

1.2.1 2-Section Kattumaram

Specifications : Log raft, four logs, wood: Albizzia Stipulata Dim. 8.3 x 1.5 x 0.5 m.

Life span : 5 years

Period and area : All year round upto 10 km. off shore.
of operation

Mode of operation/: Operated with various types of gillnets, also with boat seines, hook and sharing system line, liftnets. Operated on share basis. In the case of gillnets: 8 shares. 5 shares go to the 3-4 labourers (including owner), 2 shares to the boat and 1 share to the net.

A. Capital Cost (Rs.)	
— Cost of wood	3,500
— Making charges	700
— Sail and accessories	800
Total cost	<u>5,000</u>

B. Recurring Expenditure	
— Repair	300
C. Annual Income and Surplus	
— Earnings:	
Out of 8 shares into which the total catch is divided, the loanee will get 2 shares for his boat. He will also get one-third of the 5/8 share meant for the three crew members if he works as a labourer. His total earnings will thus be 3.6718 of the total sales proceeds.	
— Total sales proceeds	
Average catch of prawns during peak period at 5 kg/day for 45 days at Rs. 60/kg.	13,500
Average catch of other fish for the period of 215 days at 20 kg/day at Rs. 3/kg.	12,900
Gross earnings	<u>26,400</u>
— Loanee's share (gross earnings) divided into	12,100
— Boat share	6,600
— Labourer's share	<u>5,500</u>
— Gross earnings	12,100
— Annual recurring costs	<u>300</u>
Gross surplus	<u>11,800</u>
— Depreciation, annual	1,000
— Net surplus divided into	10,800
• Return on labour of loanee	5,500
• Return on investment	5,300
D. Economic Feasibility	
— Rate of return on investment	106%
— Net value added per unit of investment in Rs	4.36

1.2.2 3-Log Kattumaram

Specification : Log raft, 3 logs wood: *Albizzia Stipulata* Dim: 4.2 x 0.76 x 0.42 m

Life span : 4 years

Period and area of operation : All year round upto 5 km offshore

Mode of operation/: Operated with various types of gillnets, boat seines, hook and line, liftnets.
 sharing system Operated on share basis. In the case of gillnets, 2 shares (out of 3) to the labourers, 1 share to boat and net owner.

A. Capital Cost (Rs.)	
— Cost of wood	2,000
— Making charges	500
— Sail and accessories	<u>500</u>
Total cost	<u>3,000</u>
B. Annual Recurring Cost	
— Annual repair	200

C Annual Income and Surplus

The loanee gets 1 out of 5 shares for his labour (3 labourers) and another share for the boat, i.e., 2/5 in all

— Total sale proceeds:	
Average catch of prawns during peak period: 5 kg/day for 25 days at Rs. 60/kg.	7,500
Average catch of fish for 230 days at 10 kg per boat and Rs. 3/kg.	6,900
Gross earnings	<u>14,400</u>
— Gross earnings of loanee	7,200
— Annual recurring costs	200
— Gross surplus	7,000
— Depreciation/annual	750
— Net surplus divided into	6,250
• Return on loanee's labour	4,800
• Return on loanee's investment	1,450

D. Economic Feasibility

— Rate of return on investment	48%
— Net value added per unit of investment (in Rs.)	3.7

1.2.3 4-Log Kattumaram

Specification : Log raft, 4 logs, wood: Erythrina Indica Dim: 4.0 x 0.7 x 0.4 m.

life span : 4 years

Period and area of operation : All year round, upto 3 km offshore

Mode of operation/: Operated in combination with various gillnets and hook and line. Operated on share basis in the case of gillnets; 3 shares: 1 for boat and net-owner, 2 for 2 or 3 labourers. In this case, we assume that the boat share is 0.5 out of three, and that the loanee works as one of the two labourers.

A. Capital Cost (Rs.)

— cost of wood	1,200
— Making charges	300
— Sail and accessories	500
Total cost	<u>2,000</u>

B. Annual Recurring Cost

— Annual repair	200
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C. Annual Income and Surplus

— Total catch:	
Average catch of prawns at 4 kg for 25 days at Rs. 60/kg.	7,500
Average catch of fish at 10 kg. at 210 days at Rs. 3/kg.	6,300
— Gross earnings	<u>13,800</u>
— Gross earnings/share of loanee: 1/3 for labour and 0.5/3 for boat	6,900
— Annual recurring costs	200
— Gross surplus of loanee	6,700
— Depreciation	500
— Net surplus divided into	6,200
• Return on labour of loanee	4,600
• Return on investment	1,600

D. Economic Feasibility

— Rate of return on investment	80%
— Net value added per unit of investment (in Rs.)	5.4

2 Fishing gear

2.1 Gillnets

2.1.1 Large Mesh Gillnets

2.1.1.1 Nakuda jalo

Specification	Surface gillnet, 15-20 cm mesh size, 1 set: length 60 m, depth 20 m, E = 0.44; PAR 1035 tex
Life span	7 years
Period of operation	Spring and early summer
Mode of operation	Operated with 1 Danga, Patia or Salti, 6 persons contribute one set each, 968 m long and go fishing in one boat. The catch is equally divided into 7 shares (6 for the 6 sets of nets and one for the boat; in other cases this net is operated by wage labour).

A. Capital Cost (Rs.)

— 50 kg nylon twine PA 210 x 12 x 3 or PA 210 x 15 x 3 at Rs. 100/kg.	5,000
— 25 kg PP rope, 12 and 14 mm dia at Rs. 41/kg.	1,025
— Net weaving charges at Rs. 20/kg.	1,000
— 20 mm dia PVC floats, 40 nos, at Rs. 4 each	160
— Sinkers, 40 nos. at Rs. 1 each	40
— Charges for framing of net and miscellaneous charges	275
Total cost	<u>7,500</u>

B. Annual Recurring Expenses

— Net repair	250
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C. Annual Income and Surplus

— Expected no. of fishing days: 100	
— Expected catch per fishing day of entire unit: 70 kg	
— Total sales proceeds at Rs. 7/kg	49,000
— Loanee's share (117) = loanee's gross earnings	7,000
— Annual recurring cost	250
— Gross surplus of loanee	6,750
— Depreciation	1,072
— Net surplus divided into	5,678
• Return on labour (assumed at Rs. 10/day for 100 days)	1,000
• Return on investment	4,678

D. Economic Feasibility

— Rate of return on investment	62 %
— Net value added per unit of investment (in Rs.)	0.76

2.1.1.2 Sanla Jalo

Specification	: Surface driftnet, 15 cm mesh size, length 175 m depth 7 m, E = 0.4-0.5 PER 1140 tex
Life span	: 3/5 years
Period of operation	: All year round except for rough days from May to July.
Mode of operation/:	Operated with Patia or Danga on share basis or with wage labour, sharing system crew: 3. In this case wage labour is assumed.

A. Capital Cost (Rs.)	
— PE twine, 60 kg at Rs. 50/kg	3,000
— 20 kg. PP rope, 12 mm dia at Rs. 41/kg	820
— 120 PVC floats 15 mm dia at Rs. 3 each	360
— 80 nos. of earthen sinkers at Rs. 0.25 each	20
— Making charges at Rs. 20/kg	1,000
— Framing charges and miscellaneous	300
	5,500
B. Annual Recurring Expenditure	
— Repair	800
— Rent for a boat at Rs. 200/month for 10 months	2,000
— Wages at Rs. 10/day for 2 labourers for 210 fishing days	4,200
	7,000
C. Annual Income and Surplus	
— Expected no. of fishing days: 210 days	
— Expected catch per fishing day: 15 kg	18,900
— Annual recurring costs:	7,000
Gross surplus	11,900
Depreciation	1,375
— Net surplus	10,525
· Return on labour of loanee	2,100
· Return on investment	8,425
D. Economic Feasibility	
— Rate of return on investment	153%
— Net value added per unit of investment (in Rs.)	1.91

2.1.1.3 Phasi Jalo/Kubuliwala

Specification : Surface driftnet, 8.5-11 cm mesh size, length 350 m, depth 15 m, PER 152 tex, E = 0.5

Life span : 4 years

Period of operation : All year round

Mode of operation/: Operated with Patia or Danga, on wage labour or on share basis. In this sharing system case wage labour is assumed and a crew size of 4.

A. Capital Cost (Rs.)	
— 50 kg of PE twine at Rs. 50/kg	2,500
— 25 kg PP rope, 6 and 8 mm dia, at Rs. 41/kg	1,025
— 220 PVC floats, 8 cm dia at Rs. 1.50 each	330
— Making charges at Rs. 20/kg	1,000
— Framing	115
	5,000
B. Annual Recurring Expenses	
— Rent for a boat for 10 months at Rs. 200/month	2,000
— Repair	700
— Wages for 3 labourers at Rs. 1 O/day for 210 days	6,300
	9,000

C. Annual Income and Surplus	
— Expected no. of fishing days: 200	
— Expected catch per fishing day 23 kg	
— Gross earnings at Rs. 4/kg	18,400
— Annual recurring expenses	9,000
— Gross surplus	9,400
— Depreciation	1,250
— Net surplus divided into	8,150
· Return on labour of loanee	2,100
· Return on investment	6,050
D. Economic Feasibility	
— Rate of return on investment	121 %
— Net value added per unit of investment (in Rs.)	2.89

2.1.2 Medium and Small Mesh Gillnets

2.1.2.1. Jagawala

Specification : Driftnet used as surface or bottom net, length 320 m, depth 8 m, mesh size 6 to 7 cm, E = 0.42, PA R 76 tex

Life span : 5 years

Period of operation : All year round

Mode of operation/: Operated with one large kattumaram, 3 out of 5 shares are for the sharing system 3 labourers, 2 shares are for the net and boat owners.

A. Capital Cost (Rs.)	
— 13 kg netting	2,600
— Head rope and foot rope, PP, 5 mm dia	300
— Floats (PVC 70 x 35 mm) and sinkers (cement, 300 gm)	300
— Framing and miscellaneous	300
Total cost	<u>3,500</u>
B. Annual Recurring Cost	
— Repair of net	400
C. Annual Income and Surplus	
— Sale proceeds from prawn fishing on 45 days — 5 kg prawn/day at Rs. 60/kg	13,500
— From 210 days of fishing — 15 kg/day at Rs. 3/kg	9,450
	<u>22,950</u>
— Loanees share (115 for labour and 1/5 for net) = gross earnings	9,180
— Annual recurring cost	400
— Gross surplus	8,780
— Depreciation	700
— Net surplus divided into	8,080
· Return on labour of loanee	4,590
· Return on investment	3,590
D. Economic Feasibility	
— Rate of return on investment	103%
— Net value added per unit of investment (in Rs.)	4.93

2.1.2.2 Nyalalla

Specification : Bottom driftnet lengths 220 m, depth 3.6 m mesh size: 5.5 cm, PA R 50 tex, E = 0.4

Life span : 5 years

Period of operation : All year round, except for rough sea operation

Mode of operation/: Operated with one kattumaram, 3 out of 5 shares are for the labourers, sharing system 2 shares are for the net and boat owners.

A. Capital Cost (Rs.)

– 6 kg ready made nylon netting at Rs. 200/kg	1,200
– Head and foot rope PP, 4 mm dia	200
– Floats and sinkers	200
– Framing charges	100
Total cost	<u>1,700</u>

B. Annual Recurring Cost

– Repair of net	300
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C Annual Income and Surplus

– Sale proceeds from prawn fishing on 30 days – 30 kg/prawn/day at Rs. 60/kg	5,400
– From 210 days fishing – 10 kg/day at Rs. 3/day	6,300
	<u>11,700</u>
– Loanee's share (1/5 of labour and 1/5 for net) = Gross earning	4,680
– Annual recurring expenses	300
– Gross surplus	4,380
– Depreciation	340
– Net surplus divided into	4,040
· Return on loanee's labour	2,340
· Return on investment	1,700
D. Economic Feasibility	
– Rate of return on investment	100%
– Net value added per unit of investment in Rs.	5.13

2.1.2.3 Kilimi/Kilumala

Specification : Driftnet used as surfacenet, 5.5 cm mesh size, length 220 m, depth 3m- 4 m, PAR 50 tex E = 0.4

Life span : 5 years

Period of operation : All year round except for rough sea operation

Mode of operation/: Operated with kattumaram, on sharing system. 5 out of 8 shares are for the labourers and 3 shares for boat and net owners. The net owner is in this case allotted 0.5 share out of the 3 shares.

A. Capital Cost (Rs.)

– 6 kg ready made nylon netting at Rs. 200/kg	1,200
– Head and foot rope, PP 4 mm dia	200
– Floats and sinkers	200
– Framing charges	100
Total cost	<u>1,700</u>

B. Recurring Cost	
– Repair of net	300
C. Annual income and Surplus	
– Sale proceeds from prawn fishing on 30 days – 3 kg prawns/day at Rs. 60/kg	5,400
– From 210 days fishing 10 kg/day – Rs. 3/kg	6,300
	<hr/> 11,700
– Loanee's share (1/5 for labour and 1/5 for net) = Gross earnings	4,680
– Annual recurring expenses	300
– Gross surplus	4,380
– Depreciation	340
– Net surplus divided into	4,040
· Return on loanee's labour	2,340
· Return on investment	1,700
D. Economic Feasibility	
– Rate of return on investment	100 %
– Net value added per unit of investment in Rs.	5.13

2.1.2.4 Bhasani Jalo

Specification : Surface driftnet, 3.3 cm mesh size, length = 440 m, depth = 2 m,
PA R 50 tex, E = 0.8

Life span : 5 years

Period of operation : All year round

Mode of operation/: Operated from a Danga, Patia, Salti or Dinghy, based on wage labour sharing system or on sharing system. In sharing system 3 or 4 fishermen contribute 6 or 8 pieces of 50 m length each. In this case wage labour is assumed.

A. Capital Cost (Rs.)	
– Cost of 6 kg nylon netting (PAR 50 tax) at Rs. 200/kg	1,200
– Cost of 60 nos. of PVC floats at Rs. 1.50 each and 60 sunkers at Rs. 0.50 each	120
– Cost of 3 mm PP rope for float and sinker line	200
– Framing and miscellaneous	180
Total Cost	<hr/> 1,700
B. Annual Recurring Expenses	
– Repair of net	300
– Wages for 2 labourers at Rs. 10/day for 210 days	4,200
– Rent of a boat at Rs. 200/month for 10 months	2,000
	<hr/> 6,500
C. Annual Income and Surplus	
– Sale proceeds from 210 fishing days at 15 kg/day at Rs. 4/kg = gross earnings	12,600
– Annual recurring costs	6,500
– Gross surplus	6,100
– Depreciation	340
– Net surplus divided into	5,760
· Return on labour of loanee	2,100
· Return on investment	3,660
D. Economic Feasibility	
– Rate of return on investment	215%
– Net value added per unit of investment in Rs.	5.86

2.1.2.5 Katlala or Kavala or Kukula Jalo (Sardines)

Specification : Surface driftnet for sardines, mesh size: 25 mm to 40 mm, length 125 m, depth 9 m, PA R 50 tex E = 0.75

Life span : 5 years

Period of : November to April

Operation

Mode of operation/: Operated with one small or medium kattumaram. 2 out of 3 shares go sharing system to the two fishermen, 1 share goes to the boat and net owners.

A. Capital Cost (Rs.)

– 10 kg nylon netting at Rs. 200/kg	2,000
– PVC floats (10 mm dia)	250
– Lead sinkers (20 gm)	100
– Framing charges	150
Total	<u>2,500</u>

B. Annual Recurring Cost

– Repair of net	300
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C. Annual Income and Surplus

– Sales proceeds from 150 fishing days, 25 kg/day, Rs. 3/kg.	11,250
– Gross earnings: 1/3 as a labourer, 1/6 for the net	5,625
– Annual recurring costs	300
– Gross surplus	5,325
– Depreciation	500
– Net surplus divided into	4,825
· Return on labour	3,750
· Return on investment	1,075

D. Economic Feasibility

– Rate of return on investment	43%
– Net value added per unit of investment in Rs.	3.43

2.1.2.6 Katlala or Kavala or Kukuli Jale (Anchovies)

Specification : Surface driftnets for anchovies, small sardines and white bait; mesh size: 12-25 mm, E = 0.85, length 125 m (for 25 mm) depth 9 m (for 25 mm) PAR 50 tex

Life span : 5 years

Period of : All year round, peak: November to March
operation

Mode of operation/: Operated with small or medium kattumaram, 2 out of 3 shares accrue sharing system to the two fishermen, 1 share goes to the boat and net owner.

A. Capital cost (Rs.)

– 15 kg nylon	3,000
– PVC floats (10 mm dia)	250
– Lead sinkers (20 gm)	100
– Framing charges	150
Total Cost	<u>3,500</u>

B. Annual Recurring Cost

– Repair of net	300
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C. Annual Income and Surplus	
— Sales proceeds from 150 fishing days, 25 kg/day, Rs. 3/kg	11,250
— Gross earning: 1/3 as a labourer and 1/6 for the net	5,625
— Annual recurring cost	300
— Gross surplus	5,325
— Depreciation	700
— Net surplus divided into	4,625
· Return on labour	3,750
· Return on investment	875
D. Economic Feasibility	
— Rate of return on investment	25 %
— Net value added per unit of investment in Rs.	2.39

2.2 Encircling Nets, Inshore Seines

2.2.1 Jangal/Gheri/Khia Badia/Sabado/Sarini

Specifications : Encircling gillnet, length: 1640 m, depth: 20 m PE R 152 tex, E = 0.44.
This scheme is for 188 m.

Life span : 4 years

Period of operation : August to February

Mode of operation/: 35 persons operate the net in 5 Patias and Chhoats and contribute on sharing system an average 47 m of net each. This scheme is for 188 m which means for 2 net shares out of the total 35 shares.

A. Capital Cost (Rs.)	
— 60 kg PER 152 tex twine at Rs. 50/kg	3,000
— Rope for float and sinker line PE 5 mm and 8 mm	250
— PVC floats (10 cm dia) Rs. 3 each	950
— Earthen sinkers at Rs. 3 for 100 sinkers	25
— Making charges at Rs. 20/kg	600
— Framing and miscellaneous	175
Total cost	<u>5,000</u>

8. Annual Recurring Expenses

— Repair of net	500
— 1/10 charges for rent of 5 boats (Rs. 15/boat-per day 150days)	1,250
	<u>1,750</u>

C. Annual Income and Surplus	
— Sales proceeds from 150 fishing days at 150 kg a day and Rs. 5/kg	112,500
— Gross earnings (share of loanee is 1/10 out of gross earnings)	11,250
— Annual recurring costs	— 1,750
— Gross surplus	9,500
— Depreciation	— 1,250
— Net surplus divided into	8,250
· Return on loanee's labour (assumption 150 days at Rs. 10/day)	1,500
• Return of investment	6,750
D. Economic Feasibility	
— Rate of return on investment	135 %
— Net value added per unit of investment in Rs	1.65

2.3 Wallnet

2.3.1 Malo or Bedha

Specifications : Tidal wall net, mesh size: 40-55 mm, depth of net: 2-4 m; PER 228 tex, length of net 3-5 km E = 0.75, 700 m of net are to be financed under this scheme which is taken as 1/4 of the entire length

Life span : 4 years

Period of operation : All year round except for rough days from April-July

Mode of operation/: Gear is set 3-4 days before and after full and new moon. An area is taken on lease from the local administration by a group of fishermen who contribute cut pieces. The pieces financed under this scheme will be operated by the loanee and a labourer.

A. Capital Cost (Rs.)

— 50 kg of PER 228 tex at Rs 50/kg	2,500
— 30 kg PP rope, 8 mm dia, Rs. 30/kg	1,230
— Making charges at Rs. 20/kg	1,000
— 300 bamboo sticks at Rs. 2.50 per stick	600
— Framing of net	200
— Scoop nets (1 m dia) and iron hooks to collect the fish	170
Total cost	<u>5,700</u>

B. Annual Recurring Cost

— Repair	800
— Wage for 1 labourer for 150 days at Rs. 10/day	1,500
— Rent of a boat for 150 days at Rs. 10/day	1,500
	<u>3,800</u>

C. Annual Income and Surplus

— Sale proceeds from 150 fishing days, 120 kg per day Rs. 4/kg for total unit	72,000
— Share accruing to loanees (114 of the total) (Gross earnings)	18,000
— Annual recurring cost	– 3,800
— Gross surplus	14,200
— Depreciation	– 1,425
— Lease to revenue department	– 2,500
— Net surplus divided into	10,275
· Return on loanee's labour (1,500 is assumed)	1,500
· Return on investment-	8,775

D. Economic Feasibility

— Rate of return on investment	154 %
— Net value added (in Rs.)	2.06

2.4 Set Bag Net

2.4.1 Behundi

Specifications : Set bag net, used in a river mouth

Life span : 4 years

Period of operation: All year round

Mode of operation/: Owned and operated individually with the assistance of one wage sharing system labourer

A. Capital Cost (Rs)	
— PER tex 23 kg at Rs. 50/kg	1,150
— PP ropes of 18 mm dia and 6 mm dia 20 kg at Rs. 41/kg	820
-- Bamboos used as floats	320
— Making and framing charges	650
— Miscellaneous	60
	<hr/>
Total cost	3,000
	<hr/>
B. Annual Recurring Expenditure	
— Repair and maintenance of net	600
— Wages for 1 fisherman, 150 days at Rs. 10/day	1,500
— Rent of a boat for 150 days at Rs. 10/day	1,500
	<hr/>
	3,600
	<hr/>
C. Annual Income and Surplus	
— Gross earnings, sale proceeds from 150 days, 15 kg/day Rs. 5/kg	11,250
— Annual recurring costs	- 3,600
— Gross surplus	7,650
— Depreciation	- 750
— Net surplus divided into	6,900
• Return on labour (calculated at Rs. 10/day)	1,500
• Return on investment	5,400
D. Economic Feasibility	
— Rate of return on investment	180 %
— Net value added (in Rs.)	2.8

3. Fish Marketing

3.1 *Bicycle Fish Retail Business*

Mode of operation : The cycle trader buys the fish at a landing site, transports it to the market by cycle and sells it there.

A. Capital Cost (Rs.)	
— Fixed capital	
Cost of cycle with special carrier and accessories	600
baskets for transportation of fish, gunny bag,	
weighing balance, knife etc.	100
— Working capital	
For 1 day's purchase of fish: 40 kgs at Rs. 5/kg	200
Ice	10
Fish market fees etc	20
	<hr/>
Total cost	930
	<hr/>
B. Annual Recurring Expenses	
— Purchase of fish on 210 days, per day at 15 kg at Rs. 4/kg	12,600
— Ice on 210 days at Rs. 4/day	840
— Repair, replacement of baskets, gunny bags etc	150
— Rent for selling space Rs. 1/day	210
	<hr/>
	13,800
	<hr/>

C. Annual Income and Surplus	
— Sale proceeds at Rs. 7/kg (7 x 15 x 210)	22,050
— Annual recurring cost	- 13,800
— Gross surplus	8,250
— Depreciation (life span of cycle 6 years)	- 100
— Net surplus	8.150
D. Economic Feasibility	
— Net value added	8.76
E. Suggestion for repayment	
Period 1 year, monthly instalments	

3.2 *Headload Fish Retail Business*

Mode of Operation : 1 woman buys fish at a landing site, transports it by head load and sells it in a village market.

A. Capital Cost (Rs.)	
— Fixed Capital	
· Weighing balance	30
· Baskets	40
· Cloth or gunny bags to cover fish	15
— Working capital	
· Purchase of fish for the first day 25 kg/day at Rs. 5/kg	125
· Ice	5
Total cost	<u>215</u>
B. Annual Recurring Expenses	
— Purchase of fish on 210 days, per day 10 kg at Rs. 4/kg	8,400
— Ice on 210 days at Rs. 3/day	630
— Repair and replacement of baskets, gunny bags etc.	100
— Rent for selling space at Rs. 1/day	210
— Transport at Rs. 2/day	420
	<u>9,760</u>
C. Annual Income and Surplus	
— Sale proceeds at Rs. 7/kg (7 x 10 x 210)	14,700
— Annual recurring costs	- 9,760
— Gross surplus	4,940
— Net surplus	4,940
D. Economic Feasibility	
— Net value added	22.97
E. Suggestions for Repayment	
Period 1 year, monthly instalments	

 Scheme 1.1.1

Loan Rs 8,000
 Interest % 12.5
 Term (Yrs) 4
 Repayment of loan + Interest equalized for 10 instalments/year
 Instalment = Rs. 251.25
 Total repayment for 40 instalments = Rs. 10,050
 Annual Net Surplus Minus Repayment = Rs. 18587.5

Scheme 2.11

Loan Rs 7,500
 Interest % 12.5
 Term (Yrs) 4
 Repayment of loan + Interest equalized for 10 instalments/year
 Instalment = Rs. 235.55
 Total repayment for 40 instalments = Rs. 9,421.9
 Annual Net Surplus Minus Repayment = Rs 3,322.5

Scheme 1.1.2

Loan Rs. 7,100
 Interest % 12.5
 Term (Yrs) 4
 Repayment of loan + Interest equalized for 10 instalments/year
 Instalment = Rs. 222.99
 Total repayment for 40 instalments = Rs. 8,919.4
 Annual Net Surplus Minus Repayment = Rs. 6,610.1

Scheme 2.3.1

Loan Rs. 5,700
 Interest % 12.5
 Term (Yrs) 4
 Repayment of loan + interest equalized for 10 instalments/year
 Instalment = Rs. 179.02
 Total repayment for 40 instalments = Rs. 7,160.65
 Annual Net Surplus Minus Repayment = Rs. 8,484.8

Scheme 2.1.1.2

Loan Rs. 5,500
 Interest % 12.5
 Term (Yrs) 4
 Repayment of loan + Interest equalized for 10 instalments/year
 Instalment = Rs. 172.74
 Total repayment for 40 instalments = Rs. 6,909.4
 Annual Net Surplus Minus Repayment = Rs. 8,797.6

Scheme 1.1.3, 1.2.1, 2.2.1, 2.1.1.3.

Loan Rs.5,000
 interest %12.5
 Term (Yrs) 4
 Repayment of loan + Interest equalized for 10 instalments/year
 Instalment = Rs. 157.03
 Total repayment for 40 instalments = Rs. 6281.3
 Annual Net Surplus Minus Repayment = Rs. 4629.7, 9229.7, 6679.7

Scheme 2.1 2.1, 2.1.2.6

Loan Rs. 3,500
interest % 12.5
Term (Yrs) 4
Repayment of loan + interest equalized for 10 instalments/year
Instalment = Rs. 109.92
Total repayment for 40 instalments = Rs. 4,396.9
Annual Net Surplus Minus Repayment = Rs. 7,080.8, 3,525.8

Scheme 1.2.2, 2.4.1

Loan Rs. 3,000
Interest % 12.5
Term (Yrs) 4
Repayment of loan + Interest equalized for 10 instalments/year
Instalment = Rs. 94.22
Total repayment for 40 instalments = Rs. 3,768.8
Annual Net Surplus Minus Repayment = Rs. 5,307.8, 5,957.8

Scheme 2.1.2.5

Loan Rs. 2,500
Interest % 12.5
Term (Yrs) 4
Repayment of loan + Interest equalized for 10 instalments/year
Instalment = Rs. 78.52
Total repayment for 40 instalments = Rs. 3,140.65
Annual Net Surplus Minus Repayment = Rs. 4,039.8

Scheme 1.2.3

Loan Rs. 2,000
Interest % 12.5
Term (Yrs) 4
Repayment of loan + interest equalized for 10 instalments/year
Instalment = Rs. 62.82
Total repayment for 40 instalments = Rs. 2,512.6
Annual Net Surplus Minus Repayment = Rs. 4,571.8

Scheme 2.1.2.2, 2.1.2.3, 2.1.2.4

Loan Rs. 1,700
Interest % 12.5
Term (Yrs) 4
Repayment of loan + Interest equalized for 10 instalments/year
Instalment = Rs. 53.39
Total repayment for 40 instalments = Rs. 2,135.65
Annual Net Surplus Minus Repayment- = Rs. 3506.1, 3506.1, 5226.1

Annexure 3

LOAN APPLICATION/ACTIVITY FORM

1. Give *details* of equipments presently owned and proposed to be owned (indicate type and technical details)

	Presently owned	Proposed to be owned
1.1 Craft		
1.2 Engine		
1.3 Gear		
1.4 Processing equipment		
1.5 Marketing		
1.6 Working capital (specify items on what it will be spent)		

2. Purpose of acquisition of equipment (tick the appropriate and describe the purpose in a detailed manner.)

- 2.1 Replacement (of worn out equipment)
- 2.2 Repair
- 2.3 Complementary equipment (new type of equipment which will be used along with equipment already owned)
- 2.4 Diversification of fishing effort (new fishing method)
- 2.5 Additional equipment (of type already owned)
- 2.6 First acquisition (applicant did not own any equipment earlier)
- 2.7 Fish marketing
- 2.8 Fish processing
- 2.9 Working capital

3. *Labour for operation*

Who will operate the new equipment? (Tick the appropriate and enter answer):

3.1 Any additional labour required? Yes No

3.2 If yes, how many? Number

3.3 Type of labourers:

Labourers not contributing nets of their own

Labourers contributing net pieces of their own

Helping family members

4. *Maintenance expenses* (annual) required for:

- craft Rs.
- gear Rs.
- others: Rs.

5. *Manufacture of craft/gear*

How does the applicant propose to manufacture/prepare:

5.1 Gear

- a. Take twine and make it
- b. Take twine and get it done by payment of wage
- c. Procure readymade webbing

5.2 Craft

- a. Take wood and get it by local boatbuilder
- b. Get it 'custom-built' at a central place

6. Present support system for activity

- a. Supply arrangement for twine (fishing equipment shop)
place/distance
- b. Arrangement for repair of craft/engine etc. (boatbuilder)
Place/distance
- c. Availability and supply arrangement for ration/grocery for the family
Yes No
Place/distance
- d. What kind of arrangement exists for marketing the fish?

7. Engagement in fishing/secondary occupation

7.1 How many days in a year is the applicant engaged in sea fishing?

Number of days.

During which months?

7.2 Does he carry out any secondary occupation?

Yes No

If yes, which one/ones:

During which months:

7.3 What are the occupations (fishing and others) of the family members of the applicant?

No.	Name of member	Relationship	Occupation	Period (which months)
1.				
2.				
3.				
— No occupation <input type="checkbox"/>				

7.4 Does the applicant or his family own any non-fishing equipment (such as for agriculture, including land)?:

Yes No.

If yes, give particulars:

S. No.	Type and number of equipment, including land

8. Family Profile

- a. No. of old dependent parents:

- b. No. of children:
 - (i) below 7 years
 - (ii) 7 years and above: male:
Female:

- c. General health conditions of family members: do they serve as a drain on family's economy?

- d. Approximate consumption expenses per month:

9. Give details of the loan applied for (short term/term loan)

cost (Rs.) Specifications

- a. Craft

- b. Gear

- c. Marketing/processing equipment

cost (Rs.) Specifications

- d. Repairs

- e. Engine
(specify HP: diesel/kerosene/petrol)

- f. Working capital

- g. Others

10. Instalments he proposes to make repaying the loan:

Number of instalments

Amount per instalment

11. Security offered:

12. Availability of collateral:

Place:

Date:

Signature of applicant

Remarks of the bank's field officer/supervisor/technical officer:

Guidelines for filling in the Activity Form

1. General

It is essential that all columns of the activity forms are filled in carefully, in order to facilitate the processing of the loan application later on.

Especially the technical specifications of the items for which credit is wanted as well as the purpose for which the items are required should be given in a detailed, meaningful way.

Column 1

This column is meant to give a detailed picture of the equipment already owned and the one proposed to be financed. In case the credit is needed for working capital or repair nothing needs to be entered here.

In all other cases following specifications should be given

- Craft** : – local name
– dimensions (length, depth, breadth) (beam))
– means of propulsion (engine, sail, rowing oars)
– wood material
– accessories : dimensions and material of sail cloth, number of rowing oars.
- Engine** : – inboard/outboard
– type of fuel (diesel/kerosene/petrol)
– C C M
– BHP
- Fishing gear** : – local name
– type : English name
– dimensions (length, depth, mesh size, twine size, hook size etc.)
– material such as type of fibre etc.
– accessories such as floats, sinkers, ropes, bamboo sticks etc.
- Marketing/processing** : Specify type, dimensions and material of equipment, give local and English name.
- Working capital** : Specify context in which working capital is needed and how it will be spent.

Column 2

The column is meant to explain the purpose for which credit is proposed, why it is needed and how it will be utilized. Select only one of the given purposes and proceed according to the following instructions.

- 2.1 Replacement** : give reason why equipment has to be replaced (accident, natural calamity, age)
- 2.2 Repair** : give reason, see above
- 2.3 Complementary equipment** : Complementary equipment means for example another gillnet of different mesh size or hooks and lines which can be operated with an already existing boat that has been used earlier only in combination with some other net. Thus the new gear will complement the fishing unit. Mention the already existing equipment that will be complemented.

2.4 Diversification	Diversification means to operate a new type of fishing gear, which has not been used before by the applicant. Explain what new fish resources will be tapped and in which way the engagement of the applicant in fishing will increase as well as his earnings.
2.5 Additional equipment	Additional equipment means the acquisition of more equipment of the type which is already operated by the applicant. Explain whether the fish resources will be sufficient and whether there is enough labour available to operate more of the same gear.
2.6 First acquisition	Explain with whom the applicant plans to operate the equipment, whether he has sufficient skills and experience and whether he is indebted to anybody.
2.7 Fish marketing/ processing	State whether applicant has been engaged in marketing/processing before. In which way will the equipment help applicant to start/improve business? Mention to whom/where the fish will be marketed and whether there will be enough demand.
2.8 Working capital	Mention for which purpose working capital is required: fishing operation, marketing, processing, net making. Explain in which way it will be spent.

Column 3

This column is meant to make clear whether additional labour required by the new equipment is available.

Column 4

Do not under-estimate the annual expenditure for maintenance.

Column 5

This column is meant to give an idea as to how and where the equipment can be manufactured.

Column 6

Column 6 gives an idea whether the existing support system is sufficient. Under 6d (arrangement for marketing of fish) it has to be mentioned how (auction, fixed price.etc.) and to whom (small retailer, agent, wholesale dealers, family members etc.) the applicant sells the product.

Column 7

This column is meant to give a detailed picture about fishing and non-fishing occupations of all family members.

Column 8

This column should give an idea of consumption expenditure, non-earning family members such as old dependent persons and children below 7 years as well as about potential earners (children above 7).

Column 9

Under this column the items to be financed are to be mentioned (specific English name as well as local name) along with the amount of finance required. The specifications of the items need not be repeated.

Columns 10, 11, ,12

Monthly instalments and a total repayment period of not more than three years are desirable. Any security which is available should be mentioned here.

Annexure 4

VILLAGE PROFILE

A. Geographical *location*.

1. Name of village:
2. Name of gram panchayat:
3. Post office:
4. Block:
5. District:

B. *Ethnographic particulars*

1. Total number of fisherfolk households:
2. Average size of household:
3. Number of major time fisher-folk households:
4. Number of minor time fisher-folk households:

C. Socio-cultural *aspects* (only referring to fisherfolk population of village)

- a) Religion:
- b) Castes (in order of quantitative significance):
- c) Literacy rate in %
(those who have completed upper primary school: at least 5 years of schooling shall be termed "literate")
- d) Village festivals, social functions:

Name of festivals	Month	Average expenditure per family (estimate)

B. General infrastructure

1. Roads/traffic connection of village

a) Connected by:

- river/waterway
- footpath
- jeepable track
- motorable (car) pukka roads
- tar road

b) In the case of jeepable track, motorable pukka road, tar road, can it be used throughout the year? Yes No

- If no, during which month can it not be used?

c) In the case of river or footpath, how long does it take on foot or by boat to reach the village from the closest motorable road?

hours

2. Bus/railway connection

- How far is the nearest bus stop? km
- How far is the nearest railway station? km

3. Is the village electrified? Yes No

4. Drinking water

How many open wells/tube wells are there which are used for drinking purposes?

Open wells, Number:

Tube wells, Number:

5. Schools

What schools are available in or close to the village:

Type of school	Number	Private/Government

6. Health facilities

– Availability, in the village or close by:

Private clinic: Yes No.

Primary health centre Yes No

– Distance to nearest government/private hospital: km

7. Distance to nearest police station: km

post office: km

bank branch: km

8. Distance to nearest:

– fishing gear shop/trader: km

– engine repair shop: km

– boat builder (local): km

– diesel/petrol supply: km

E. *Natural calamities*

Was the village affected by any natural calamity during the past five years?

Type of calamity	Year	Damage caused

F. *Economic Activities*

F.1 Sea fishing

a) What crafts are used? (Give specifications)

Type of craft	Number

– Traders/specieswise

Fish species	Type of trader (small retailer, agent of wholesaler, etc.)	Final market outlet (surrounding villages: Cuttack, Calcutta)

F.2 Second occupations of fisher-folk households

No. of households	Engaged in
	agriculture
	animal husbandry
	trading, transport etc.
	cottage industry
	others

Pattern of land use (by fisherfolk) if any:

- crops grown acres type
- plantations type acres
- land left fallow for fodder: acres:
- land suitable for plantation of fuel species, not used so far:
acres
- waste land acres

G Existing government support

- Distance from block office km
- Distance from livestock aid centre km
- Distance from agriculture extension centre km
- Distance from marine fisheries extension centre km

H. Institutional finance received so far: Yes No

If yes,

Institution	Type of finance (credit, subsidy etc.)	Amount	Year

I. General remarks and *recommendations*, if any, of the surveying officials to highlight the areas needing attention and development. :

Place:

Signature of Surveying Officer

Date:

Annexure 5

COURSE PROGRAMME: TRAINING COURSE ON CREDIT AND FINANCIAL ASSISTANCE IN SMALL-SCALE FISHERIES

Date		Topic	Lecturer/Staff
March 29 1982	0930- 1000	Opening Ceremony	
	1030- 1200	Analysis of role expectations of fishery extension officers (sgd)	Tietze
	1330-1700	Principles of extension and extension methods – scope, philosophy in developing countries with a historical background of extension activities.	Jaiswal
March 30	0930- 1000	Methods & experiences of some successful extension work in bringing about modernization in developing countries.	Jaiswal
	1030- 1200	System approach to extension work.	Jaiswal
	1330- 1500	Communication process – Components of communication – feedback and its Importance in building up a good extension programme. Different kinds of communication channels.	Sen
	1530- 1700	Factors influencing adoption of new techniques and equipment for bringing about technological change.	Sen
March 31	0830-1000	General principles of extension programme planning – steps involved in programme planning.	Jaiswal
	1030- 1200	Monitoring and evaluation of extension programmes	Jaiswal
	1330- 1500	Practical session on use and preparation of audio-visual aides in extension (wg)	Jaiswal
	1530- 1700	Practical session on a.v. aids (continued) (cs)	
April 1	0830-1000	Transfer of technology in small-scale fisheries I (cs)	Kalavathy
	1030-1200	Transfer of technology in small-scale fisheries II (cs)	Tietze
	1330-1500	Analysis of case studies (cs)	Kalavathy Tietze
	1530- 1700	Generalization and application (pgd)	Kalavathy Sen, Tietze Jaiswal

April 2	0830- 1000	Role of credit in rural develop- ment (1)	Mukhopadhyay
	1030- 1200	Structure of rural credit	Mukhopadhyay
	1330- 1500	Policy changes	Mukhopadhyay
	1530- 1700	Schemes for weaker sections	Mukhopadhyay
April 3	0830- 1000	Credit needs in traditional fishing communities	Tietze
	1030- 1200	Individual processing of survey data (iwa)	
	1330- 1500	Individual processing of survey data (continued)	
	1530- 1700	Individual processing of survey data (continued)	
April 5	0830- 1000	Comparison of jurisdiction-wise credit needs (sgd)	Mukhopadyay, Kalavathy, Tietze
	1030- 1200	Generalization and specification of credit needs (pdg)	-do-
	1330- 1500	Project planning and preparation of credit shemes (1)	Mukhopadhyay
	1530- 1700	Cooperative credit in Orissa (cs)	Cooperative Training College
April 6	0830- 1000	Analysis of case study (sgd)	Cooperative Training college, Mukhopadhyay, Tietze, Fisheries Department
	1030- 1200	Cooperative credit in Orissa: procedure, preparation of schemes	Cooperative Training College
	1330- 1500	Financial assistance via ARDC	ARDC
	1530- 1700	Financing weaker sections by banks	SBI
April 7	0830-1000	Credit via IRDP in Orissa	Community Development Department
	1030- 1200	Preparation of block credit plans	-do-
	1330-1500	Preparation of action plan (iwa)	Mukhopadhyay, Tietze, Kalavathy
	1530- 1700	(continued)	-do-
April 8	0830- 1000	Comparison and adjustments (sgd, pgd)	-do-
	1030- 1200	Course evaluation	-do-
	1330-1500	Closing ceremony	-do-

Key

- 1 : lecture
- pgd : Plenary group discussion
- sgd : Small group discussion
- wg : Working groups
- iwa : Individual work assignment
- rtd : Round table discussion
- cs : Case study

Annexure 6

SCHEDULE FOR BRANCH-LEVEL SURVEY

Name of Bank Branch:

Name of Branch Manager:

Name of Field Officer:

Date of visit:

Questions to Branch Manager or Field Officer

1 FIRST VISIT TO BANK BRANCH:

1 *Applications:*

1.1 State the no. of applications received/villagewise:

1.2 State the no. of loans applied for schemewise and purposewise
(if not known by manager, to be taken from activity form)

1.3 State the no. of applications rejected schemewise and purposewise
(to be checked with activity form)

1.4 What was the reason for rejection:

- a. Was the village profile referred to:
- b. Was the activity form referred to:
- c. Any other reason
If yes explain:

2. *Sanctioning of applications*

2.1 State the no. of applications sanctioned, schemewise.

2.2 State the purpose of the loans sanctioned, in numbers

2.3 Was any security offered?
If yes, what?

2.4 State the time period from submission of applications to

- a. Sanctioning
- b. Disbursement

3. *Delay in processing of applications*

3.1 Was there any stagnation or delay in processing of applications?
Yes/No. If yes, at which stage and how long?

Stages	
Delay	

What were the reasons: Administrative/non-administrative
Explain:

4. *Loan disbursement*

4.1 How was the supplier selected (only by bank, jointly with loanee, FEO)?

4.2 How did the loanee obtain the equipment from the supplier?
(collected himself, equipment was distributed in a function, others):

4.3 Did the bank check whether loanee made any arrangements to resell
,equipment to the supplier? Yes/No If yes, how?

Has it happened in any case? Yes/No If yes explain:

5. *Repayment*

5.1 How many weeks after the disbursement of the loan has the loanee to
commence repayment?

5.2 Are the repayment schedules as suggested in BOBP scheme or have they been modified?
Yes/No? If yes, explain:

5.3 How are the instalments collected, how often?

5.4 Does the bank allow the lapses in repayment in cases of poor fishing etc
Yes/No. Explain:

5.5 What are the reasons for good and poor repayment as experienced by the bank?

Good repayment:

Poor repayment:

5.6 What are the actual repayment positions of loanee (amounts repaid in % of amounts due to according to repayment schedule)

loanee	repayment

6. Data to be obtained about the loanees through interviews:

6.0 Name of loanee:

6.1 The schemes applied for/scheme sanctioned:

6.2 Purpose of utilization (as given in activity form)

6.3 Date of application:

6.4 Date of sanctioning of loan:

6.5 Date of disbursement:

6.6 Repayment position and savings position:

II. SECOND VISIT TO BANK BRANCH

1. Savings Accounts

1.1 How many loanees have opened savings accounts?

1.2 What are the amounts saved so far?

loanee	amount

2. *Response to informal credit systems and local leaders*

2.1 Have moneylenders/local leaders contacted the branch? Yes/No. If yes what did they request?

3. *Recommendations*

3.1 Regarding modifications of village profile and activity form

3.2 Saving:

3.3 Others:

B. Questions to the loanees

Name of loanee:

1. *Reasons for credit application*

1.1 Did you apply for the credit first because you came to know about it through the Extension Officer?

1.2 Was the item for which credit was given particularly desired by you or was it suggested by the Fisheries Extension Officer?

2. *Supply of equipment and utilization*

2.1 What item did you obtain:

What was the cost?

What is the period of operation?

2.3 How are you using it? (according to the categories given in question 2, activity form: purpose of acquisition)

3. *Sanctioning and disbursement*

3.1 How long did it take the bank to sanction and disburse the loan (in weeks)?

Sanction: Disbursement:

3.2 Did the loanee get the equipment in time at the beginning of the fishing season? Yes/No

If no reason for delay:

4. *Cooperation from bank and extension officer*

4.1 Were the officials cooperative to fishermen? Yes/No

Explain:

4.2 Was Fisheries Extension Officer helpful? Yes/No

Explain:

5. Repayment

- 5.1 Will it be possible to repay loan according to the schedule suggested by bank? Yes/No
If no, why not:

What repayment schedule do you suggest?

- 5.2 How does the bank collect the instalments?

Do you find it convenient? Yes/No
If no, what do you suggest?

6. *Suggestions for savings:*

7. Did acquiring the loan improve your economic situation? Yes/No
If no, why not? If yes, to what extent?

Questions to the Extension Officer

1 *Motivating the fisherfolk*

- 1.1 Did you suggest to fisher-folk to apply for credit under BOBP scheme or did the fisherfolk approach you to arrange for credit?

- 1.2 Were fisherfolk agreeable to schemes? Yes/No

Did they suggest other schemes?

- 1.3 Was the idea of village profile and activity form explained to them.
Yes/No

2. *Processing of loan application by bank*

2.1 Was there any delay in processing of applications? Yes/No

If yes, at which stages and why

Stage	Reason for delay

2.2 Did the bank officials take village profiles and activity forms seriously? Yes/No?

If yes, how did they use them (explain, give examples):

3. *Reactions of informal credit system and local leaders*

3.1 What was the reaction in the village after loans were granted?

From local moneylenders:

From local leaders:

From others:

4. *Utilization of loans*

4.1 Are there cases where loanees used loans for other purposes than stated in activity forms?
Yes/No?

If yes, how many? Explain:

5. Recommendations for modification of village profile:

Activity form:

BOBP scheme in general:

Recommendations for saving scheme:

Annexure 7

PROGRAMME OF APRIL 1988 TRAINING COURSE ON FISHERIES FINANCE

[Held at College of Agricultural Banking, Pune]

<i>Day</i>		Topic	Resource Institution
14.04.86 Monday	09.30-11.00	Introduction/registration	Inaugural address by Mr. R.P. Satpute, Chief Officer, Reserve Bank of India.
	11.15-12.45	Topic Marine fisherfolk of India: ethnographic and socio- economic features	Dr U. Tietze
	13.45-15.15	Continued	U. Tietze
	15.30-17.00	Topic II Marine resources: distribution/abundance, annual catch (including slide show)	Dr. M. Devaraj CIFE
15.04.86 Tuesday	09.30-11.00	Level of exploitation of marine resources: Concepts of Maximum Sustainable Economic Yield (MSEY), Catch per Unit Effort (CPUE), present trends in India	Devaraj CIFE
	11 :15-12.45	Topic III Traditional non-mechanized fishing craft and gear (including slide show)	P. Mohapatra Additional Director of Fisheries Orissa
	13.45-15.15	Mechanised small-scale fishing craft and gear (including film strip)	P. Mohapatra
	15.30-17.00	Topic IV Improvement of small-scale fishing craft and methods: development of motorized beachlanding craft for the east coast of India	R. Ravikumar, Naval Architect, BOBP.

16.04.86 Wednesday	09.30-11.00	Topic V Present system of processing of marine products for domestic consumption and improvements (including film)	Dr. K.P.P. Nambiar MPEDA
	11.15-12.45	Present system of marketing of marine products for domestic and export markets	Dr. Ramalingam MPEDA
	13.45-15.15	Topic VI Coastal aquaculture, operational features and financial requirements (including video)	S.K. Mohanty Dept. of Fisheries Orissa
	15.30-17.00	-do-	
17.04.86 Thursday	09.30- 11 .00	Topic VII Institutional arrangements for rural credit in India	CAB.
	11.15- 12.45	Approach of institutional finance towards financial requirements of small-scale fisheries and fisher-folk	R.G. Dandekar NABARD
	13.45-15.15	Techno-economic appraisal of fisheries credit scheme, Example: Shrimp Farming (including video)	R.G. Dandekar
	15.30-17.00	Topic VIII Fisheries extension services (including audio-visual)	U. Tietze
18.04.86 Friday	09.30-11.00	Topic IX Cost/benefit analysis	CAB
	11.15-12.45	Continued	CAB
	13.30-15.15	Continued	CAB
	15.30-17.00	Work assignment: financial evaluation of artisanal fisheries credit scheme	CAB
19.04.86 Saturday	09.30-11.00	Review of work assignments	CAB
	11.15-12.45	Topic X Preparation for field trip	CAB
20.4.86 Sunday		Travel	CAB

21.04.86 Monday to 23.04.86 Wednesday		Field trip to 3 sites (preparation of project pro- posals for bank finance)	CAB
24.04.86 Thursday	09.30-11.00	Finalization of field study reports	CAB
	11.15-12.45	Topic XI Appraisal of loan applications, loan disbursement, security of loans: credit flow	K.C. Nayak SBI Bombay
	13.45-15.15	Loan recovery, supervision, coordination	KC Nayak
	15.30-17.00	Operational problems in fisheries finance (plenary session).	K.C. Nayak
25.04.86 Friday	09.30-11.00	Topic XII Financing for large-scale fishing vessels (including video)	R.G. Dandekar NABARD
	11.15-12.45	Case study: Financing of joint venture in tuna purse seining	R.G. Dandekar NABARD
	13.45-15.15	Topic XIII The role of fisheries in the 7th 5-year Plan	Mr. S.B. Sarma Joint Secretary (Fisheries) Government of India
	15.30-17.00	Topic XIV Course evaluation	CAB
26.04.86 Saturday	09.30-11.00	Discussing of field study reports	CAB
	11.15-12.45	Discussing of course, evaluation and closing	

Publications of the Bay of Bengal Programme (BOBP)

The BOBP brings out six types of publications

Reports (BOBP/REP/...) describe and analyze completed activities such as seminars, annual meetings of BOBP's Advisory Committee, and projects in member-countries for which BOBP inputs have ended.

Working Papers (BOBP/WPI/...) are progress reports that discuss the findings of ongoing BOBP work.

Manuals and *Guides* (BOBP/MAG/...) are instructional documents for specific audiences.

Miscellaneous Papers (BOBP/MIS/...) concern work not originated by BOBP — but which is relevant to the Programme's objectives.

Information *Documents* (BOBP/INF/...) are bibliographies and descriptive documents on the fisheries of member-countries in the region.

Newsletters (*Bay of Bengal News*), issued quarterly, contain illustrated articles and features in non-technical style on BOBP work and related subjects.

A list of publications follows.

Reports (BOBP/REP/...)

1. Report of the First Meeting of the Advisory Committee. Colombo, Sri Lanka, 28-29 October 1976 (Published as Appendix 1 of IOFC/DEV/78/44.1, FAO, Rome, 1978)
2. Report of the Second Meeting of the Advisory Committee, Madras, India, 29-30 June 1977. (Published as Appendix 2 of IOFC/DEV/78/44.1 FAO, Rome, 1978)
3. Report of the Third Meeting of the Advisory Committee. Chittagong, Bangladesh, 1-10 November 1978 Colombo, Sri Lanka, 1978. (Reissued Madras, India, September 1980)
4. Role of Women in Small-Scale Fisheries of the Bay of Bengal Madras, India. October 1980.
5. Report of the Workshop on Social Feasibility in Small-Scale Fisheries Development Madras, India. 3-8 September 1979. Madras, India, April 1980.
6. Report of the Workshop on Extension Service Requirements in Small-Scale Fisheries Colombo, Sri Lanka, 8-12 October 1979. Madras, India, June 1980.
7. Report of the Fourth Meeting of the Advisory Committee Phuket, Thailand, 27-30 November 1979, Madras, India, February 1980.
8. Pre-Feasibility Study of a Floating Fish Receiving and Distribution Unit for Dubla Char, Bangladesh. G. Eddie, M.T. Nathan. Madras, India. April 1980.
9. Report of the Training Course for Fish Marketing Personnel of Tamil Nadu. Madras, India. 3-14 December 1979. Madras, India, September 1980.
- 10.1 Report of the Consultation on Stock Assessment for Small-Scale Fisheries in the Bay of Bengal. Chittagong, Bangladesh, 16-21 June 1980. Volume 1: Proceedings. Madras, India, September 1980.
- 10.2 Report of the Consultation on Stock Assessment for Small-Scale Fisheries in the Bay of Bengal. Chittagong, Bangladesh, 16-21 June 1980. Volume 2: Papers. Madras, India. October 1980.
11. Report of the Fifth Meeting of the Advisory Committee. Penang, Malaysia, 4-7 November 1980. Madras, India, January 1981.
12. Report of the Training Course for Fish Marketing Personnel of Andhra Pradesh. Hyderabad, India. 11-26 November 1980. Madras, India, September 1981.
13. Report of the Sixth Meeting of the Advisory Committee. Colombo, Sri Lanka, 1-5 December 1981. Madras, India. February 1982.
14. Report of the First Phase of the "Aquaculture Demonstration for Small-Scale Fisheries Development Project" in Phang Nga Province, Thailand. Madras, India, March 1982.
15. Report of the Consultation-cum-Workshop on Development of Activities for Improvement of Coastal Fishing Families. Dacca, Bangladesh, October 27-November 6, 1981. Madras, India, May 1982.
16. Report of the Seventh Meeting of the Advisory Committee. New Delhi, India, January 17-21, 1983. Madras, India. Madras 1983.
17. Report of Investigations to Improve the Kattumaram of India's East Coast. Madras, India, July 1984.
18. Motorization of Country Craft, Bangladesh Madras, India, July 1984.
19. Report of the Eighth Meeting of the Advisory Committee. Dhaka, Bangladesh, January 16-19, 1984. Madras, India, May 1984.
20. Coastal Aquaculture Project for Shrimp and Finfish in Ban Merbok, Kedah, Malaysia. Madras, India, December 1984.

21. Income-Earning Activities for Women from Fishing Communities in Sri Lanka Edeltraud Drewes Madras, India. September 1985.
22. Report of the Ninth Meeting of the Advisory Committee Bangkok, Thailand, February 25-26, 1985 Madras, India, May 1985.
23. Summary Report of BOBP Fishing Trials and Demersal Resources Studies in Sri Lanka. Madras, India, March 1986.
24. Fisherwomen's Activities in Bangladesh: A Participatory Approach to Development Patchanee Natpracha Madras, India. May 1986.
25. Attempts to Stimulate Development Activities in Fishing Communities of Adirampattinam. India. Patchanee Natpracha, V.L.C. Pietersz. Madras, India. May 1986.
26. Report of the Tenth Meeting of the Advisory Committee. Male, Maldives 17-18 February 1986. Madras, India, April 1986.
27. Activating Fisherwomen for Development through Trained Link Workers in Tamil Nadu, India. Edeltraud Drewes. Madras, India, May 1986.
28. Small-scale Aquaculture Development Project in South Thailand, Result and Impact. E. Drewes. Madras, India, May 1986.
29. Towards Shared Learning: An Approach to Non-formal Adult Education for Marine Fisherfolk of Tamil Nadu, India. L.S. Saraswathi and Patchanee Natpracha. Madras, India, July 1986.
30. Summary Report of Fishing Trials with Large-Mesh Driftnets in Bangladesh. Madras, India. May 1986.
31. In-Service Training Programme for Marine Fisheries Extension Officers of Orissa, India. U. Tietze. Madras, India, August 1986.
32. Bank Credit for Artisanal Marine Fisherfolk in Orissa. India. U. Tietze, Madras, India, May 1987.
34. The Coastal Set Bagnet Fishery of Bangladesh-Fishing Trials and Investigations. S.E. Akerman. Madras, India, November 1986.
35. Brackishwater Shrimp Culture Demonstration in Bangladesh. M. Karim. Madras, India. January 1987.
37. High-opening Bottom Trawling in Tamil Nadu, Gujarat and Orissa, India: A Summary of Effort and Impact. Madras, India. February 1987.

Working Papers (BOBP/WP/ . . .)

1. Investment Reduction and Increase in Service Life of Kattumaram Logs. R. Balan. Madras, India, February 1980.
2. Inventory of Kattumarams and their Fishing Gear in Andhra Pradesh and Tamil Nadu. T.R. Menon. Madras, India, October 1980.
3. Improvement of Large-Mesh Driftnets for Small-Scale Fisheries in Sri Lanka. G. Pajot. Madras, India, June 1980.
4. Inboard Motorisation of Small G.R.P. Boats in Sri Lanka. Madras, India, September 1980.
5. Improvement of Large-Mesh Driftnets for Small-Scale Fisheries in Bangladesh. G. Pajot. Madras, India, September 1980.
6. Fishing Trials with Bottom-Set Longlines in Sri Lanka. G. Pajot, K.T. Weerasooriya. Madras, India. September 1980.
7. Technical Trials of Beachcraft Prototypes in India. O. Gulbrandsen, G.P. Gowing. R. Ravikumar. Madras, India, October 1980.
8. Current Knowledge of Fisheries Resources in the Shelf Area of the Bay of Bengal. B.T. Antony Raja. Madras, India, September 1980.
9. Boatbuilding Materials for Small-Scale Fisheries in India. Madras, India, October 1980.
10. Fishing Trials with High-Opening Bottom Trawls in Tamil Nadu, India. G. Pajot, John Crockett. Madras, India, October 1980.
11. The Possibilities for Technical Cooperation between Developing Countries (TDC) in Fisheries. E.H. Nichols. Madras, India, August 1981.
12. Trials in Bangladesh of Large-Mesh Driftnets of Light Construction. G. Pajot, T.K. Das. Madras, India. October 1981.
13. Trials of Two-Boat Bottom Trawling in Bangladesh. G. Pajot, J. Crockett. Madras, India, October 1982.
14. Three Fishing Villages in Tamil Nadu. Edeltraud Drewes Madras, India, February 1982.
15. Pilot Survey of Driftnet Fisheries in Bangladesh. M. Bergstrom. Madras, India. May 1982.

16. Further Trials with Bottom Longlines in Sri Lanka. Madras, India, July 1982
17. Exploration of the Possibilities of Coastal Aquaculture Development in Andhra Pradesh
Soleh Samsi. Sihar Stregar and Martono Madras, India, September 1982.
18. Review of Brackishwater Aquaculture Development in Tamil Nadu. Kasemsant Chalayondeja and
Anant Saraya. Madras, India, August 1982
19. Coastal Village Development in Four Fishing Communities of Adirampattinam. Tamil Nadu, India
F.W Blase, Madras, India, December 1982.
20. Further Trials of Mechanized Trawling for Food Fish in Tamil Nadu
G. Pajot. J. Crockett S. Pandurangan. P.V. Ramamoorthy. Madras, India. December 1982
21. Improved Deck Machinery and Layout for Small Coastal Trawlers G. Pajot, J. Crockett, S. Pandurangan and
P.V. Ramamoorthy. Madras, India, June 1983.
22. The Impact of Management Training on the Performance of Marketing Officers in State Fisheries Corporations.
U. Tietze. Madras, India. June 1983.
23. Review of Experiences with and Present Knowledge about Fish Aggregating Devices.
M. Bergstrom Madras, India, November 1983.
24. Traditional Marine Fishing Craft and Gear of Orissa. P. Mahapatra. Madras, India, April 1986.
25. Fishing Craft Development in Kerala. Evaluation Report. O. Gulbrandsen. Madras, India. June 1984
26. Commercial Evaluation of IND-13 Beachcraft at Uppada, India. R. Ravikumar. Madras, India, June 1984
27. Reducing Fuel Costs of Small Fishing Boats O. Gulbrandsen Madras, India, July 1986.
28. Fishing Trials with Small-Mesh Driftnets in Bangladesh
G. Pajot and T.K. Das. Madras, India, March 1984.
29. Artisanal Marine Fisheries of Orissa: a Techno-Demographic Study M.H. Kalavathy and U. Tietze
Madras, India, December 1984.
30. Mackerels in the Malacca Straits Colombo, Sri Lanka, February 1985
31. Tuna Fishery in the EEZs of India, Maldives and Sri Lanka Colombo, Sri Lanka, February 1985
32. Pen Culture of Shrimp in the Backwaters of Killai, Tamil Nadu: A Study of Techno-economic and Social
Feasibility Rathindra Nath Roy, Madras, India, January 1985.
33. Factors that Influence the Role and Status of Fisherwomen. Karuna Anbarasan.
Madras, India, April 1985.
34. Pilot Survey of Set Bagnet Fisheries of Bangladesh Abul Kashem. Madras, India, August 1985.
35. Pen Culture of Shrimp in the Backwaters of Killai, Tamil Nadu. M. Karim and S. Victor Chandra Bose
Madras, India, May 1985
36. Marine Fishery Resources of the Bay of Bengal. K. Sivasubramaniam. Colombo, Sri Lanka, October 1985.
37. A Review of the Biology and Fisheries of Hilsa ilisha in the, Upper Bay of Bengal. B.T. Antony Raja
Colombo, Sri Lanka, October 1985.
38. Credit for Fisherfolk: The Experience in Adirampattinam. Tamil Nadu, India.
R.S. Anbarasan and Ossie Fernandez. Madras, India, March 1986.
39. The Organization of Fish Marketing in Madras Fishing Harbour. M.H. Kalavathy.
Madras, India, September 1985.
40. Promotion of Bottom Set Longlining in Sri Lanka. K.T. Weerasooriya. S.S.C. Pieris, M. Fonseka
Madras, India, August 1985.
41. The Demersal Fisheries of Sri Lanka. K. Sivasubramaniam and R. Maldeniya
Madras, India, December 1985.
42. Fish Trap Trials in Sri Lanka. (Based on a report by T. Hammerman). Madras, India, January 1986
43. Demonstration of Simple Hatchery Technology for Prawns in Sri Lanka. Madras, India. June 1986.
44. Pivoting Engine Installation for Beachlanding Boats. A. Overa, R. Ravikumar. Madras, India, June 1986
45. Further Development of Beachlanding Craft in India and Sri Lanka.
A. Overa, R. Ravikumar, O. Gulbrandsen, G. Gowing. Madras, India, July 1986
46. Experimental Shrimp Farming in Ponds in Polekurru. Andhra Pradesh, India. J.A.J. Janssen, T. Radhakrishna
Murthy, B.V. Raghavulu, V. Sreekrishna. Madras, India. July 1986.
47. Growth and Mortality of the Malaysian Cockle (*Anadara Granosa*) under Commercial Culture. Analysts through
Length-Frequency Data. Ng Fong Oon. Madras, India, July 1986.
48. Fishing Trials with High-Opening Bottom Trawls from Chandipur, Orissa. India.
G. Pajot and B.B. Mohapatra. Madras, India, November 1986.
50. Experiences with Manually Operated Net-Braiding Machine in Bangladesh. B.C. Gillgren
Madras, India, November 1986.

- 51 Hauling Devices for Beachlanding Craft A Overa. P A Herrnninghyth Madras, India. August 1986
- 53 Atlas of Deep Water Demersal Fishery Resources in the Bay of Bengal T Nishida and K Sivasubramaniam Colombo Sri Lanka, September 1986
- 54 Experiences with Fish Aggregating Devices in Sri Lanka K T Weerasooriya Madras, India. January 1987

Manuals and Guides (BOBP/MAG/)

- 1 Towards Shared Learning Non-formal Adult Education for Martne Fisherfolk Trainers' Manual Madras, Indta, June 1985
- 2 Towards Shared Learning Nonformal Adult Education for Marine Fisherfolk Animators' Guide Madras Indta, June 1985
- 3 Fishery Statistics on the Microcomputer A BASIC Version of Hasselblad's NORMSEP Program D Pauly N David J Hertel-Wulff Colombo Sri Lanka, June 1986

Miscellaneous Papers (BOBP/MIS/)

- 1 Fishermen's Cooperatives in Kerala A Critique. John Kurien Madras. India October 1980
- 2 Consultation on Social Feasibility of Coastal Aquaculture Madras, India. 26 November-1 December 1984 Madras. India. November 1985
- 3 Studies on Mesh Selectivity and Performance of the New Fish-cum-Prawn Trawl at Pesalai Sri Lanka MS M Siddeek Madras, India, September 1986
- 4 Motorization of Dinghy Boats in Kasafal, Orissa § Johansen. O Guibrandsen Madras, India, November 1986

Information Documents (BOBP/INF/)

- 1 Women and Rural Development in the Bay of Bengal Region Information Sources Madras, India. February 1983
- 2 Fish Aggregation Devices: Information Sources Madras, India, February 1982
- 3 Marine Small-Scale Fisheries of India, A General Description Madras, India, March 1983.
- 4 Marine Small-Scale Fisheries of Andhra Pradesh- A General Description Madras, India. June 1983
- 5 Martne Small-Scale Fisheries of Tamil Nadu A General Description Madras, India. December 1983
- 6 Marine Small-Scale Fisheries of Sri Lanka A General Description Madras, Indta. November 1984
7. Martne Small-Scale Fisheries of Orissa A General Description Madras, India. December 1984
8. Marine Small-Scale Fisheries of Bangladesh A General Description Madras, Indta. September 1985
- 9 Food and Nutrition Status of Small-Scale Fisherfolk in India's East Coast States A Desk Review and Resource Investigation. V. Bhavani. Madras, India, April 1986

Newsletters (Bay of Bengal News):

25 Issues quarterly from January 1981 to March 1987